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National Nutrition Conference

MEANS OF STIMULATING PRODUCTION—HOME AGRICULTURE*

Chairman's Address

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This session will discuss the wider aspects of nutrition and the organisation of agriculture. Agriculture can be organised in a variety of ways; for example, in the hope of securing a certain amount of profit or at least a modest livelihood for those who engage in it, or, again, in the hope of securing the maximum output from the land, which will mean, of course, the largest contribution to the national health, or, as it is interpreted in Central Europe, the largest measure of self-sufficiency, obviously of great importance in the case of war. Agriculture can also be organised in such a way as to produce the maximum efficiency of nutrition. Agricultural science and practice have now developed to such an extent that it is possible to organise agriculture in any of these directions. We are present to-day to discuss the possibility of the third of these alternatives —organising agriculture with a view to nutrition. British agriculture has not in the past consciously tried to do this, but we shall probably find as the discussion proceeds that we are not so very far from doing it at the present time. The reason why we have not gone very far in this direction is because, frankly, agriculturists do not set out to know very much about human nutrition. They are experts, of course, on animal nutrition, but not experts on dietetics. They may have their views on the subject, but those views are not based on direct scientific data.

What are the foods which have to be produced if we are aiming at maximum biological efficiency? In what quantities should this food be produced, and further—this is a most important question—what is the value of freshness in food? Is English lamb killed yesterday or the day before actually better than New Zealand lamb of high quality which may have been killed some months ago and has been kept in good cold storage ever since? Is English fresh butter better than good Australian or New Zealand butter? Are fresh vegetables straight from one's own garden better than vegetables raised by professional market gardeners which have gone through the routine of marketing, including rail and road transport, exposure in shops, and delivery? Is fresh fruit that one grows oneself better than fruit preserved in tins which may have been grown many months ago many thousands of miles away? These are questions on which information is desired. Such information will help us very much not only in our work, but in propaganda among the people who buy agricultural produce, and if it is decided that a change in organisation is needed in order to bring about greater biological efficiency, how is this change to be arranged and particularly how is it to be financed?

Agriculture, after all, is a business. Farmers are not big capitalists, and if they are asked to change their products for methods of production some kind of assurance must be given to them of a market for these increased products, and a market which will return them a price which makes rather more than good the costs of production.

Finally, it must be remembered that agricultural production is a very slow process. I suppose that if the community desired to have double the output of boots, that could be arranged in the course of a very few weeks or months. But if it desired to double the output of milk it would be a matter of many months before it could be accomplished. All this takes time. Agriculture is determined by seasonal factors which cannot be controlled. There is no means of expediting the change of the seasons or the natural processes whereby animals are born and grow up to give the meat and the milk which is wanted. These are the fundamental considerations in such a discussion as is to take place this afternoon.

*Address and papers presented to the second session (devoted to means of stimulating home production) of the National Conference summoned by the British Medical Association to consider the wider aspects of nutrition, held on April 27th, 28th and 29th at B.M.A. House, Tavistock Square, W.C.1.

PAPER No. 1.—VISCOUNT ASTOR

I suppose you have invited me to speak because I was for two years Chairman of a League of Nations Commission on Nutrition and Agriculture and because I was also Chairman of a British Group which spent five years going into the whole subject. I have also myself farmed for many years. At the moment I have a dairy herd numbering 140 cows in milk or with young stock—a herd of over 400 head. I mention this because I do not want critics to put me down as a mere theorist.

I thank you for your invitation to take part in this Conference. The public do not yet realise the importance of nutrition—or the damage caused by malnutrition. A League Committee of experts under the Chairmanship of Sir Edward Mellanby emphasised that even the medical profession were not fully aware of this. When the public do recognise the importance of, and when doctors demand, a real national nutritional policy, politicians will take the matter up seriously. They have not yet done so—it should be our next social reform. We ought to have an adequate nutrition policy as we have a full-blown policy on housing, sanitation, education, fitness.

Nutrition and Agriculture

I am glad one session is devoted to agriculture. The connection between agriculture and nutrition is obvious. What has not yet been realised is the difficulty in having an adequate nutrition policy and a properly nourished population unless we reorientate and alter our present agricultural policy.

Background of the Present Situation.

There are three points to bear in mind:—

Firstly, that the knowledge about the science of nutrition is recent. Our agricultural policy is based on an out-of-date conception of consumer needs. It antedated our new knowledge about vitamins, etc. We have thought in terms of bread and not of butter—of a dietary based mainly on the energy foods which peasants have in backward Continental countries where there is still hunger, instead of thinking of a balanced dietary with minerals, with proteins, with fats—the sort of mixed dietary which comes after hunger has been abolished. So our farm policy is not up to date for meeting the needs of consumers to avoid the evils of malnourishment.

Secondly, we tend to forget about the industrial revolution of last and of this century. It brought about an enormous expansion of our world trade and increase in our population and a big development in our national wealth. This was accompanied by an improved standard of living. With this rising standard the public demanded a more mixed dietary. As pointed out by the Ministry of Health Committee on Nutrition, the consumption of meat, dairy produce, vegetables, went up and that of cereals went down. Farmers adapted themselves to this altered demand. Our fattening pastures in the Midlands, our numerous dairy districts replaced corn growing. History is merely repeating itself. After the Napoleonic wars farmers said they were ruined but a new and efficient generation succeeded them. Given the opportunity, a new generation is ready to take on now.

Later came the slump. Farmers, like industrialists, suffered from the world drop in prices. The slump hit hardest those farmers who were most challenged by overseas competition whose branches were the most uneconomic and the least suited to our climate and soil. These farmers were also the most affected by the new discoveries, inventions and progress. These farmers naturally shouted loudly for help. It was right to tide them over a difficult time. But it would be wrong to prop them up on our present scale indefinitely just as it would be extravagant to subsidise hansom cabs against taxis and try to retard a complete change over in our transport.

The third point is that unfortunately when Parliament set out to help agriculture after the War it had a wrong mental picture of the requirements of farming. It was a picture of agriculture in the last century. It was a picture of waving fields of corn—of home-grown bread—of wheat as the corner-stone of farming—of horse teams ploughing—of the super-importance of arable.

It is both amusing and sad that at the moment when Parliament put millions into expanding wheat, which requires less labour than any other cultivated crop, an investigation financed by the Ministry of Agriculture proved that it was more important even for our grain belt (the Eastern counties) to have good prices for livestock products than for wheat. At the moment when Parliament put millions into beet sugar, there was such an improvement in cane sugar that it knocked out any future prospects of economic sugar production here. Of course this money to wheat and sugar has helped some farmers just as subsidising the home production of bananas would help some producers. But it has retarded the natural and desirable change-over from the production of uneconomic energy foods to that of economic protective foods.

Parliament forgot the discoveries of the past two generations—the New World prairies where wheat could be grown much more cheaply. M.P.s did not know that this overseas wheat was better for bread than home-grown wheat. They forgot about the combine harvester—about the advent of petrol engines—and

mechanisation. They failed to realise the effect of these discoveries. Parliament applied the wrong test to agricultural prosperity. The right test is not the extent of arable acreage or the numbers employed. The right test is the value of our output and the extent to which it meets the needs of the public. Mechanisation—the tractor—the milking machine—the lorry—must reduce hand labour. But this reduction in the numbers engaged does not prove decay in farming any more than the adoption of labour-saving machinery for coal cutting or boot-making spells decay in industry.

The agricultural revolution of the past 50 years has been accompanied by a radical change in the structure of agriculture. Because of the inventions of engineers, chemists, plant breeders, consumers were threatened with the benefit of cheap food and farmers were threatened with the benefits of science and progress. The endeavour of too many farmer politicians has been to prevent either group getting these benefits. Our aim should be to develop a new agriculture for the future, an agriculture suited to our times and needs, not to revive the agriculture of the past when world conditions were entirely different.

Discoveries are not ended: science still has much advance in store for us.

Present State of Agriculture.

Agriculture is not a dead industry, nor is it a dying industry. We grow fewer cereal crops but produce more livestock; our wheat acreage is "half as great as in 1870"; wheat is less than 3 per cent. of our output; sugar is only slightly over 2 per cent. But the numbers of our cows, of our bullocks, have gone up enormously. Dairying and livestock represent 70 per cent. of home production. Our production of eggs has increased by some 200 per cent. since 1913; our output of vegetables and fruit has increased enormously.

Most people are not aware that to-day the gross output of British farming is greater than it has ever been. This change has not made life easy. It has often been troublesome to farmers. This change-over has forced farmers to alter their methods, ideas, output. Some of them have done it gallantly and successfully, but there has been a lot of grumbling. The change is not yet complete.

We must not stereotype agriculture as is being done with the commodity schemes. Every time we have a scheme which fixes the quantity of a food to be produced and attempts to guarantee a profit on that quantity, we create a new vested interest. These interests must oppose any change which would diminish their output and profits. This must hamper periodic changes in the relative proportions of crops or other branches of farming. It must mean stagnation.

Function of British Agriculture.

What should be the function of British agriculture? To *help* provide the food needed: not to provide it all ourselves. We could produce most of the petrol and oil we require by converting coal into its component parts. But self-sufficiency in oil to-day would be economic suicide. So with food: a policy of self-sufficiency is economic lunacy. It is quite right that we should import certain foods, which, because of climate, soil, cheap labour or other conditions, can be produced much cheaper overseas—the public benefit. A Government publication rightly states that "The United Kingdom is the largest food-importing country in the world. This has been associated with a high standard of food consumption."

In spite of improvement in dietary we still need a largely increased consumption of the health protective foods. Our additional consumer needs to raise our dietary to the optimum are stated to be: 80 per cent. more milk, 40 per cent. more butter, 55 per cent. more eggs, 30 per cent. more meat, 120 per cent. more fruit, 85 per cent. more vegetables. Our agricultural policy should aim at supplying more of those perishable foods where propinquity to market gives us a natural advantage.

Causes of Malnutrition.

Malnutrition is caused partly by ignorance, but is mainly due to poverty.

Poverty Figures.

(*a*) Recent social surveys show that millons of our people are below the poverty line: Bristol, 11 per cent.; Merseyside, 15 per cent.; Plymouth, 16 per cent.; Southampton, 21 per cent.; Sheffield, 19 per cent.

(*b*) Sir John Orr states that eight million people have a diet that is below the B.M.A. minimum standard (a low minimum).

(*c*) Mr. Seebohm Rowntree estimates that some £5,000,000 extra cash is needed by the working class in order to have a minimum (not an optimum) dietary for children in large families.

(*d*) The Government's own Advisory Committee accepted as accurate investigations which showed that four-and-a-half million spend only four shillings per week and nine million only six shillings per week on food and that these millions are malnourished.

This and all other impartial committees agree that the chief cause of malnutrition in Britain is lack of purchasing power. We must face up to this: it bears directly on our agricultural policy. Millions of people simply cannot to-day afford to give their children enough of the health foods to avoid the evils of malnourishment. Any agricultural policy which reduced their purchasing power by

putting up the cost of living would still further render them liable to malnourishment.

It is hardly necessary to remind ourselves of heavy prospective taxation due to rearmament. At no distant date there is bound to be a demand for economy and retrenchment. The taxpayer cannot afford to pour out unlimited millions.

The money available for agriculture is not unlimited. It is limited and is going to be still further limited whether the money is put into the farmers' pockets through higher prices (higher cost of living) or through subsidies (higher taxation). It is vital to appreciate this.

We must use this money to the best advantage and we must link up the interest of consumers with those of producers. As long as we spend so many millions on the least economic foods, we will not be able to spend enough on cheapening the health foods for the children and mothers who need them to avoid the ills of malnutrition. The recent trend of farm policy conflicts with the development of an adequate nutrition policy.

When Britain gave up free trade, farmers asked for tariffs; politicians were frightened by the recollection of the old food tax bogey so they adopted quotas and marketing schemes and price control. They fooled themselves and the public and the farmer.

This period coincided with the era of "planning," so we planned through: price control (to guarantee profits), production control, import control (quotas), and marketing schemes.

I have no time to examine these in detail. They have led us into a sort of "Alice in Wonderland" policy. We have planned for scarcity. A new crime has been invented, the crime of selling cheap milk. A bacon scheme was produced which cost the consumer £5,000,000 but of this only £1,000,000 went to the home farmer, the other £4,000,000 went to the overseas farmer.

Marketing Boards.

Parliament decided to try and improve the marketing of foods. But it confused the preparation of food for marketing, *i.e.*, grading, with the control of distribution. The former is sound; the latter leads to trouble and disappointment.

Marketing Boards were set up. There are separate schemes for milk, for hops, for potatoes, etc. The Boards are monopoly producer trusts—elected by farmers alone—responsible to farmers alone: they are not under Parliament; they were given statutory powers to fix their own prices. What would you feel if munition firms had been formed into rings and allowed to fix their own profits without supervision? It is against human nature for a producers' ring not to take advantage of the situation. A Board only accountable to its constituents and wishing to be re-elected cannot insist on maximum efficiency or reduce prices.

Milk Board.—Milk is by far the most important commodity for nutrition. If children and nursing mothers can have sufficient milk, our problem is largely solved.

I have not a word to say against the personnel of the Milk Board: they are hard-working and able. But the Board's structure cannot be justified. The Board is much too sectional in its outlook: its constitution and composition prevent its having a national outlook. Parliament is to blame.

Look at the situation. Britain with its climate and soil is eminently suited to dairying, yet we find that after five years of the Milk Scheme the retail price of milk has risen and is high compared to other countries; our milk consumption is low and compares unfavourably with that of other countries, the dairy industry is disgruntled and up in arms. That is the position after five years of a Milk Scheme devised by a producer monopoly. What have the Milk Board done? They invented a new crime punishable by a fine—that of selling cheap milk.

Milk and Milk Products.—Milk is a finished product ready for sale as milk. Milk is perishable. It has a natural advantage against imported milk: it does not have to encounter much overseas competition in the liquid milk market.

But milk is also the raw material for manufactured products such as cheese and butter. Home-made cheese and butter have not the same protection against overseas competition; they can be stored and shipped long distances. They are and can be produced much more cheaply overseas, *e.g.*, in New Zealand, in Denmark and in Holland.

Butter and cheese are important articles of diet. Their use, especially that of butter, varies with their price: when butter is cheap the poor eat more butter; when it is dear they turn to margarine. Stopping the importation of cheap butter as farmers desire will not mean that the poor will eat dearer English butter—any more than stopping cheap Danish bacon has meant that people eat more English bacon. The poor just eat less bacon and less butter when the price is forced up. This is not good for their nourishment.

When there was a glut of milk the Board should have reduced the price so as to adjust supply to demand by eliminating the more costly producers. Instead they encouraged the building of factories for making butter and cheese. But as butter and cheese are uneconomical the factories had to be heavily subsidised. The Milk Board imposed concealed

levies on milk drinkers ranging up to threepence per gallon. This meant that milk drinkers have had to pay £6,000,000 more per annum for their milk and this sum is a subsidy to the factories for milk products. These factories also get direct subsidies from you, the taxpayer.

The Board had to choose between two alternative policies, namely, to make profits by producing a small quantity of milk for a high price or to encourage more efficiency and competition and thereby to make profits by producing a large quantity for a smaller price. They had to choose between producing Rolls Royces for the few or Ford cars for the many. They rejected Fords for the multitude. The Milk Board's official publication, *The Home Farmer*, revealed their policy as being "to produce a little for a lot rather than a lot for a little." This policy, I suggest, conflicts absolutely with the public interest.

Of course there always has to be a certain surplus of milk to meet fluctuations in the liquid milk market. Quite a small surplus meets those requirements, however, and such a small surplus is entirely different from the large surplus now expanded by subsidies for milk products.

Distribution.—Next the Milk Board (according to the Food Council) formed an *entente* with distributors, fixed unnecessarily high distributors' margins and resisted rationalisation. Considerable economies are eventually possible in distribution. The price of milk could be cheapened by improved distribution, just as it could be cheapened by greater efficiency in production. My criticisms of the Board—its constitution—the fact that a producer monopoly cannot put things right—its action in putting up the price of milk in order to subsidise butter factories—the fact that the price of milk is higher than it need be—are not original. They are all to be found in a report of inquiry instituted by the Ministry of Agriculture.

I admit straight away that the views I am expressing do not coincide with the official farmers' policy. But I submit that it would be unwise to give airplane manufacturers monopolist rights to decide their own prices and output without fear of competition or supervision. It is impossible for farmers to decide disinterestedly on questions affecting industry or foreign policy or economics. They are farmers, not economists. They are farmers, not diplomats. They are farmers, not exporters. I do not blame them for only being human beings like you and me. Because they are magnificent fellows just like you and me, efficient at their job of producing food, we must not also put on them the impossible task of settling the policy of such Departments as the Board of Trade, the Treasury, the Ministry of Health, the Foreign Office, which must frequently conflict with their own outlook.

Need for Safer Milk.—Lastly, the Board helped to resist the urgent demand for safer milk in the near future. It is hard for the Government and doctors to urge mothers to give children milk which may give them tuberculous glands or joints. The ideal is tubercle-free herds, but it is costly and may take many years to get. I know how hard and costly, vexatious and discouraging it is to maintain a tubercle-free herd—I have been at it for 30 years. We cannot wait till we reach the ideal of the complete eradication of tuberculosis from our herds when there is another method and a cheaper one for reducing the ravages of bovine tuberculosis.

Pasteurisation.—The medical profession is now standing back from giving fullest support to the Drink More Milk Campaign. This is not surprising: every year there are over 6,000 fresh cases of bovine tuberculosis and about 2,500 deaths. So far attempts by the Government to protect the public against bovine tuberculosis and other diseases which can be milk-borne, such as typhoid, diphtheria, epidemic diarrhoea, undulant fever, have been frustrated by sectional interests.

There is a regulation which lays it down that no milk is to be given to calves in attested herds unless the milk comes from a tubercle-free herd or unless it is pasteurised. Mothers may well ask why more care should be taken to save calves from tuberculosis than to save their children. Make the milk safe by pasteurisation and doctors will become more active propagandists.

This *must* benefit farmers. It must be better for farmers to sell a large quantity of pasteurised milk than a small quantity of unpasteurised milk or than to sell it to factories. They get 1s. 4d. for milk drunk but only about 6d. for milk manufactured. It is short-sighted of farmers to block a process which at small cost makes milk immediately much safer without diminishing its real value in other ways. Mind you, pasteurisation is not an alternative to clean or hygienic milk. We must not cease our efforts to improve raw milk as well.

Last autumn when the Government finally decided that the whole situation was unsatisfactory and required amending legislation, they introduced a Bill to give us safer and cheaper milk. There was a sectional outcry and agitation. The Parliamentary opposition was headed by the Government's own creation, its own infant, the Milk Board. The Bill was hastily withdrawn. You, the medical profession, did not give the Bill enough support and the public was unorganised and ill-informed. For the moment our prospects of getting better, safer,

cheaper milk—an essential of a real nutrition policy—have gone. It seems impossible to reconcile the outlook of an unsupervised producer monopoly with the interests of the nation as a whole.

Alternatives — An Up-to-Date Programme

What are the alternatives?

1. *Subsidise the Consumption of the Health Foods.*—Subsidise the consumption of home-grown health-protective foods for mothers, infants, children, by encouraging local authorities to push ahead with cheap meals at clinics, schools, etc., and by encouraging them to give the Oslo breakfast.

We have already begun this policy with: (*a*) the Milk in Schools Scheme; (*b*) cheap milk to mothers in certain distressed areas; (*c*) free milk and free meals given to needy cases; (*d*) school meals.

This policy of subsidising the consumption of health foods would lead to a big expansion in the home production of: milk, eggs, vegetables, fruit, potatoes. This should be the corner-stone of our agricultural policy.

2. *Subsidise Research.*—Spend more on research, especially into: (*a*) animal health (disease now costs up to £19,000,000 per annum); (*b*) grass drying; (*c*) improving pastures. This is of vital importance as our grass acreage is 23,000,000 acres, *i.e.*, about three times as big as our acreage under all cereals. Cereals grown here are used largely for animals, not for human beings. They are part of the raw material of the livestock industry. There is nothing radical in altering the character of our animal food by developing grass and other forage crops, clovers, lucernes, etc., which are suited to our rainy climate, rather than developing cereals for which many of our wet districts are unsuited. We should increasingly maintain our livestock on cheaply grown field crops rather than on purchased concentrates.

3. *Make new Knowledge more generally available.*—Bring the latest knowledge within easy access to farmers.

4. *Help General Efficiency.*—(*a*) reconstruct out-of-date farm buildings and re-equip derelict farms; (*b*) improve soil fertility by greater use of animal manure, carcase residue, etc., by liming and drainage; (*c*) have better housing, school buildings, water supplies, electricity, health services, in rural districts; (*d*) improve the quality of farm stock, of our cattle, pigs, sheep, poultry.

There is a great need for improving the quality of our breeding stock. English cattle do not compare well with Irish or Scottish cattle: the average herd life of English cows is appreciably less than in Denmark, Holland or Ireland. Poultry and their system of management can be improved; they now have too much disease. There will always be a good market for high-class beef, mutton, pork. Above all, do not block efficiency by checking fair competition and propping up the more costly producers as at present.

5. *Alter the Structure of Marketing Boards.*—Have a majority nominated by the Government and so get a national, not a sectional, outlook dealing with milk and other commodities. This has been done in Ulster with success.

6. *Tempo.*—There must be no violent change in policy—but a gradual re-orientation and change from the uneconomic energy foods to the more economic health-protective foods.

Agriculture must have reasonable stability—know in advance the direction of policy.

As the consumption of the health foods increases through the expenditure of public money on a nutrition policy, so we can reduce the amount of public money which is being spent on stimulating the expansion of wheat and sugar.

Get away from quotas, planning for scarcity, limitation of output, stopping healthy competition.

Guarantee bottom prices so as to save farmers from ruin if world prices slump—but do not guarantee profits.

Where protection is necessary use tariffs rather than prohibitions whether called gentlemen's agreements or quotas. Already we have a tariff for vegetables where it works well. This would increase efficiency and be less costly to the public than control through quotas and profit guarantees.

7. *Allow the Importation of.*—Wheat, sugar, bacon, butter, cheese. Their home production will not cease altogether. We shall have a normal instead of an extravagant, artificially expanded production of these commodities. Import most of these and allow the public to benefit by discoveries, by the fact that the tropical climate of some countries enables them to grow sugar at half our cost—that New Zealand is able to send us cheap butter—that the prairies can give us better and cheaper bread.

8. *Fisheries.*—Fish is an important health food. So develop our fisheries. There should be a separate Fisheries Department.

Farming as a whole will be more prosperous when the change-over has taken place. This policy will also benefit those export industries whose prosperity is essential for our economic existence, and whose goods cannot be utilised by our farmers. Buying certain foods abroad will keep the good will of the Dominions and friendly neutrals and aid our shipping. Buying cereals from Roumania, butter and bacon from Holland and Denmark, will help them to preserve their

economic independence instead of being dominated by Germany, as must be the case if we do not buy from them.

Contrast the Present Policy with an Up-to-Date Policy

PRESENT POLICY INCONSISTENT WITH NUTRITION POLICY.

1. A large expenditure of public money, most of which helps only a few farmers, *i.e.*, chiefly the Eastern counties, to grow crops which are not needed for the well-being of the people.
2. It is costly to the consumer. So costly that there is not enough money available to finance a national nutrition policy.
3. So farmers are likely to forfeit the good will of 90 per cent. of the population (urban voters).

OUR ALTERNATIVE POLICY.

1. Makes a real nutrition policy possible. Cheapens food for adults by increasing efficiency. Subsidises and so cheapens the health foods for mothers and children.
2. Gives help to farmers all over the British Isles.
3. Secures the good will of the urban voter for agriculture and so gives farmers what they need—security and prosperity.

This policy of marrying the interests of agriculture and nutrition would bring health and welfare to millions of people.

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PAPER No. 2—Dr. K. A. H. MURRAY

Lord Astor has given a comprehensive account of the developments in British agriculture since planning was started in 1931. His paper shows where the weaknesses of this country's agricultural policy have lain and the mistaken emphasis arising from ignorance of the developments in the science of nutrition; and he has given a clear indication of preferable lines of advance.

It is the purpose of this paper to discuss two aspects of the problem; firstly, to outline briefly what may be termed the natural lines of development in British farming over the last 70 years and to indicate to what extent it provides those protective foods, the lack of which is considered the main cause of the inadequacies of existing diets. Secondly, to discuss the extent to which these deficiencies can be made good by an expansion of British farming, and what steps, such as reduced production costs or higher prices, may be necessary to bring out this desired increase in output.

For 70 years or more, British farming has been gradually increasing its output of what are now known as protective foods. These changes have been caused by two main factors, the rapid industrialisation of this country and the fierce competition of overseas agriculturists.

Industrial development and the growth of the urban population—the total population of Great Britain almost doubled between 1861 and 1931—affected British farming in two ways. On the one hand it forced up the price of agricultural labour and land, thus increasing the farmer's costs of production; but, on the other, the higher returns resulting from industrial enterprise were enabling the townspeople to pay for "dearer" or higher-valued foods such as meats and dairy products instead of buying the cheaper foods such as cereals and potatoes. The difference in the costs of these two types of foods, so far as they are considered as energy-producing, is very considerable; for example, the housewife can obtain 3,000 calories for 5d. to 10d. from oatmeal, bread, or potatoes; on the other hand, the same quantity of energy from milk costs 2s. 4d., from eggs 3s. 6d. in summer to 7s. in winter, from meat 5s. to 9s., and from the commoner fruits and vegetables, 4s. to over 14s.

THE COST TO THE CONSUMER OF 3,000 CALORIES FROM VARIOUS FOODS.

Food.	Retail Price.	Cost of 3,000 Calories.
		s. d.
Oatmeal...	3d. per lb.	0 5
Bread	7d. per 4 lb. loaf	0 5
Margarine	7d. per lb.	0 7
Potatoes...	1s. 2d. per stone	0 10
Cheese	10d. per lb.	1 3
Milk	3½d. per pint	2 4
Eggs	1s. per doz.	3 6
Oranges...	½d. each	4 5
Lamb, British	1s. 8d. per lb.	5 0
Beef, imported... ...	1s. 3d. per lb.	5 8
Apples, Canadian ...	5d. per lb.	5 10
Beef, British rumpsteak	1s. 10d. per lb.	8 4
Veal, British	2s. per lb.	9 0
Cabbage, spring ...	2d. each	10 4
Tomatoes, imported ...	6d. per lb.	14 5

These few comparative costs show how important a part is played by the purchasing power of the population in circumscribing their choice of energy-producing foods. It is also evident that the so-called "protective" foods are also the dearer foods.

The growth in imports was the second important factor. The incredibly rapid improvements and extension of transport during the nineteenth century, first by the use of steam and subsequently by the invention of the internal combustion engine, together with

improved methods of storage, brought into cultivation vast new areas of land previously beyond the reach of the main centres of the world's industrial population. At first, the competition was strongest mainly for cereals, but as time went on the pressure spread to meat, dairy produce and finally fruits.

The British farmer did not give up the struggle against these overseas farmers, working with equal skill and generally under more favourable natural conditions, but has made continuous efforts to meet them; these adjustments have taken two main directions; an increased output of those commodities for which market demand in this country was increasing and for which natural conditions were fortunately better suited; and a reduction in his production costs, particularly in the cost of labour.

The change in the type of product produced was towards greater production of the "dearer" foods. The extent to which this occurred may be estimated from the figures for 1908 and 1924, the first years of complete output figures. Though the total output of farming was practically the same in 1924 as in 1908, the value of the output of dairy products (mainly milk), eggs, and of fruits and vegetables, after corrections for changes in prices, had increased by 14 per cent., 50 per cent. and 25 per cent., respectively; the same trends have continued since then as the sale of farm crops and certain heavier types of meat have dropped. As Lord Astor has mentioned, this change has reached such a point that about 70 per cent. of the British farmer's income, amounting to about £250 million a year, comes from the sale of livestock products, and 15 per cent. from fruits and vegetables; only about 10 per cent., excluding potatoes, comes from the sale of crops such as wheat, sugar beet and so on.

From the point of view of the supply of the principal protective foods, home production now provides about 46 per cent. of our meat requirements, 65 per cent. of the poultry and eggs, 100 per cent. of the milk, 73 per cent. of the vegetables other than potatoes, 32 per cent. of the fruit and 17 per cent. of the butter and cheese. It is in the production of non-protective foods such as wheat and sugar that home production is so unimportant.

While making every effort to meet the demands of the consumer, the farmer has tried still further to compete with the flood of cheap food from overseas by reducing his production costs, and so successful has he been that there are many people to-day who consider that, in the interests of national stability and balance, this efficiency has gone too far in that their efforts have reduced the numbers of persons in farming to too low a level.

Economies in the use of labour have constituted the main approach to the problem of lower costs and these have been effected in many ways. Between 1921 and 1931, approximately two million acres of crops and grass went out of cultivation, 1¾ million acres of crops and ¼ million acres of grassland. This drop in labour requirements was partly compensated, however, by the big increase in the output of livestock, particularly dairy cattle. It has been estimated that this switch-over in farming practice would have entailed a drop of only about three per cent. in total labour requirements if there had been no change in the efficiency in the use of labour. In actual practice, however, by 1931 the farmer was able to dispense with over 25 per cent. of the workers he had employed in 1911.

Since 1931, output has increased by a further 17 per cent. with six per cent. less labour. In the last 15 years British farmers have succeeded in raising their output by so much as 40 per cent. per person employed in the industry. A few examples may illustrate how these economies are possible. Firstly there has been the laying down of arable land to grass. A hay crop requires only about 16 hours of labour per acre per year and permanent pasture about three hours. On the other hand, wheat and oats require about 40 to 60 hours, while turnips require 140 to 150 hours. It costs about £1 to grow, pull and cart one ton of turnips for cattle feeding, and 12 tons of turnips are equivalent to about one ton of maize, which can be bought for about £6 to £7. There is no longer room for such margins of difference and the farmer naturally buys for £7 what it costs him £12 to grow; it is not surprising that the acreage of turnips and mangolds fell by 650,000 acres in ten years.

Cash crops which have now taken their place in the farm economy include those vegetables previously grown in market gardens, such as brussel sprouts, cauliflower, broccoli, cabbages, carrots, peas and beans. These changes have not only resulted in a greater return for the wages paid but also in a quicker turn-over and more economical use of capital.

Again, there is the growth in mechanisation; to many it is possibly the most significant feature of the last ten years of British farming. With a three-furrow plough a tractor can cover three acres a day, or, normally, about 375 acres a year; the maximum that a man and a pair of horses could achieve is less than 125 acres. The latter costs about 12s. an acre, the former about 5s. It would be a mistake to think of mechanisation as merely a change-over from the horse to the tractor, since the use of machinery is permeating practically all branches of farming and its effects in the aggregate may be as

great as the substitution of the tractor for the horse. Many hours used to be spent in driving milk to the market, potatoes to the railway siding, pigs and cattle to the butcher, or sheep to the fair; these jobs are now done by truck or lorry. Similarly outside delivery brings to the farm feeding stuffs, fertilisers, and so one. Oil and petrol engines, both stationary and movable, are now used fairly generally to lessen labour within the farm buildings. For example, the use of the milking machine has increased very rapidly recently and reduced the labour required for milking. One man and a boy in open-air dairying can look after 60 to 70 cows where six men were required under the old system.

There are numerous other changes which have been made, and are being made, by farmers in an attempt to bring their costs into line with the prices the consumer is willing to pay, either by increasing the output for the same wage expenditure or by reducing the wage bill while maintaining the same output.

Space prohibits any detailed description of the improvements in the breeding and feeding of livestock, better yields, earlier maturity and so on, which all result finally in lower costs. For example, the average annual milk yield per cow has been raised from 550 gallons in pre-War years to about 744 gallons in 1935; the egg yield per hen has been increased from 72 to about 130 in the same period.

These few examples may serve to give some idea of how British farming has been adapted to changing conditions due to changing demand by consumers and to increasing competition from overseas, the severity of which was, before 1931, in no way alleviated by any protectionist policy such as was instituted by so many other countries.

What, then, of the future? Lord Astor has outlined what is wanted from British farming if it is to play its part in the provision of adequate diets for all people in this country—an increased output of milk, butter, eggs, meat, fruit and vegetables. It will be seen from this list that, with the exception of butter, these are the products the production of which has been increasing in this country over the last 50 or 60 years during which time agriculture was allowed to develop in conformity with economic forces and before "planning" started to stimulate uneconomic lines of development.

On the assumption that a still greater output of protective foods is required, the question remains as to how far home-production can fill the bill and how this expansion can be brought about. The question is, of course, one of relative production costs and returns and, for purposes of discussion, the various considerations have been divided into these two categories, those making for reduced costs and reduced prices and those making for greater returns and greater output. By these two means alone can a greater supply be obtained at a price which the consumer can afford to pay for these dearer foods.

Taking first the possibility of reducing the cost of producing these protective foods, it is well to remember that a mere reduction in the cost of production is not in itself a guarantee of a greater output of a product; the progress must be more rapid than that in other types of farming, at home or overseas, or in other industries, if more labour or capital is to be used to increase the production of protective foods.

While agricultural progress is more rapid to-day than it has been for many years, it is doubtful whether the present rate of progress is as rapid as in other industries or in farming overseas. The continued drift from the land suggests that farming has still a long way to go before the technical efficiency is sufficiently high to enable it to pay wages on a scale equal to that of urban industry. Again, it must be remembered that scientific discoveries and improvements in agricultural technique and ways of reducing costs cannot generally be confined to the advantage of one country's producers but find wider application; for example, at one period, improvements in breeding and feeding of cattle were increasing the output of milk in this country at the rate of 2 per cent. per year, but at the same time the application of these new principles was increasing the butter fat production per cow in New Zealand at the rate of 3 per cent. per year. This is all the more reason for encouraging only those lines of production where this country has very definite comparative advantages.

While it might be unwise to expect a marked general increase in the output of protective foods as the result of a rapid change in relative costs of production, there is much new knowledge still available, the adoption of which would probably work to the advantage of the home farmer. Many of these new ideas have already been tried and proved; they await only wider application to bring about a more economical use of land, labour and capital. The following are a few of the most promising developments which may be expected eventually to reduce production costs and therefore bring down the price to the consumer of these protective foods. For crops, information is now available on improved breeds and strains of grass, the control of most pests and parasites, the nutritional requirements of plants, the place of organic substances in promoting plant growth, the importance of soil tilth and structure, the effect of different systems of

husbandry on the soil; for livestock, there are possible advances by breeding methods, by the use of milk and pig recording, by the better use of the mineral, protein and vitamin content of feeding stuffs, by the better balancing of rations, the prevention of most animal diseases; for farming practice, there is the possible extension of power farming, the greater use of electricity, the better cultivation and use of grassland, new types of machinery and buildings at lower prices. Given some of these improvements, it may yet prove possible to bring into cultivation thousands of acres of land that are at present submarginal and almost derelict, such as the heath lands in East Anglia, vast areas of hill country in England, Wales and Scotland which is of small carrying capacity.

Some of these possibilities have been mentioned by Lord Astor and will doubtless be dealt with more fully by Mr. Hurd and Professor Miller in subsequent papers. There are, however, two aspects which might be stressed; one is management and the other is the need for further research and education.

It is possible that the greatest scope for reducing production costs now lies in better management or organisation of the different enterprises on the individual farm. The application of new discoveries is dependent on the ability, financial and otherwise, on the imagination, and on the determination of the farmer himself. The farmer is possibly the most variable factor in farming at the present time; there are wide differences in farming profits which cannot be explained by differences in natural conditions, size of farm and so on. Many examples could be given of individual farmers who have been making profits during these periods when, according to general accounts, farming is being carried on at a loss; cases of farmers making £2 an acre on farms of 5,000 to 6,000 acres are known; the other day a claim for compensation brought out the fact that a certain farmer had made certified profits of £2,000 a year for the last three years, at the cost of one hour's work per day.

The problem of the proper organisation and management of the farm has been complicated to a great degree by the unfavourable conditions of recent years and there is little doubt but that a continued drift of people for over a hundred years out of any industry must tend to lower the average standard of efficiency, particularly when conditions are changing rapidly. The problems of each farm are different and call for a different solution, and the choice of a solution is not an easy one. The substitution of a tractor for a horse and man is in itself no guarantee of more profitable working; the milking machine in the place of the hand milker will not in itself ensure economy of labour; it is only by attention to detail throughout the whole organisation that efficiency is achieved. There is no rule of thumb method or code of management that can be applied wholesale; farming conditions, soil, climate, lay-out of fields and buildings, and, above all, differences in the farmers' capabilities make this impossible. The problems of each farm are different and call for a different solution. All over the country to-day one can find changes in farm practice and management; some farmers are cutting costs by specialisation, others by departmentalisation, in the many various enterprises that constitute the mixed holding which is so typical of British farming. Many drastic breaks from time-honoured customs may be found, such as the Hosier system of open-air dairying and poultry farming on the Wiltshire Downs, the mechanical farming of the Alley brothers in Norfolk, the specialised corn-growing on the Bayliss farms, and so on.

It may be claimed that these changes are of limited application but re-organisation is just as possible for the more normal types of farming. On an average mixed farm for which details are available, changes in organisation have resulted in amazine economies. In return for every £100 spent on wages, the value of produce sold, after allowance for changes in prices, increased in ten years by 80 per cent., from £190 to £342; the rate of capital turnover was reduced from 25 months to approximately 12 months, and so on. In this instance it is interesting to note the saving in labour cost was not brought about by employing fewer men; the number of permanent workers was increased from 10 to 18 and the wages paid by the farmer rose from 37s. 4d. to 88s. 11d. per acre. Profits, the ultimate test of good management, were increased greatly.

Further evidence of variations in managerial ability is suggested by the great differences in production costs between one farm and another. The accompanying table shows, by way of example, the differences in milk production costs on over 400 representative farms in England and Wales. While the average is about 10½d. per gallon, the range is from under 5d. to over 1s. 7d. a gallon. About one quarter of the milk is produced at a cost of between 5d. and 9d., while another quarter costs between 11d. and 1s. 7d. The same dispersion is found for both summer and winter production periods. Even if allowance is made for possible exaggeration of differences by accounting methods, further analysis indicates that these wide variations are attributable not to such factors as size of farm or herd, which are not entirely questions of management, but to differences in farm management.

Distribution of Net Farm Costs of Milk Production on 409 Farms in England and Wales.

Cost in Pence per Gallon.	No. of Farms.	Percentage of Milk Produced.
Under 5 ...	1	0·18
5 to under 7	11	1·79
7 „ 9	94	21·70
9 „ 11	161	40·85
11 „ 13	101	26·64
13 „ 15	31	6·87
15 „ 17	6	1·20
17 „ 19	3	0·71
19 „ 21	1	0·10
	409	100·00

Similar variations in costs can be found for other types of farming, and, from the point of view of possible reduction in production costs, their significance cannot be over-estimated.

Closely linked with this question is the possibility of reducing costs by research and education. There is no time to discuss this problem in any detail, but it is evident that there is an amazing inadequacy in both. The total expenditure on research, of which 90 per cent. is provided by the State, is considerably less than one per cent. of the value of the total output of the land. While there is a good case for State assistance, since the community should assist in services that benefit the community, there is also a good case for increased support from interests that benefit more directly from the results of research, such as the processors and distributors of farm products and requirements.

The results of research, however, are useless if there are no efficient links for bringing them into practice. The existing provisions are quite inadequate to cope with the rapid developments in scientific research. Anyone who has seen the American University "extension services" at work must realise how deficient are the funds available for the provincial and county advisory services in this country. The very intricacies of British, as compared with American, farm organisation make these services all the more necessary. As was stated in the recent report by P E P on "Agricultural Research in Great Britain," "In agricultural research, as in other economic activities, a public relations policy is no longer an American novelty but a British necessity." Not only would the spreading of new discoveries be accelerated but it would lead to a greater recognition by the individual farmer of his vital concern in agricultural research.

The reduction of costs in agricultural production is unfortunately a slow process since farming is an industry in which the speed of adaptation of new ideas is conditioned by biological factors. One cannot "stream line" a cow or install a new type of carburettor to achieve an immediate reduction in running costs; one cannot bring about the immediate and general adoption of new methods, however sound they may be. The expansion of the home-output of protective foods by greater efficiency must of necessity be a gradual one, whereas the need for a greater consumption of these foods is an urgent one.

The other method of bringing about an expansion in the home-production of protective foods was by increasing the farmers' returns. The following are the most important means by which higher returns could be achieved: (1) reduced output; (2) reduced marketing costs; (3) increased demand; (4) subsidies.

The first method, supply restriction, must be ruled out since it conflicts directly with the objective, an increased consumption of protective foods. The restriction of imported food supplies may also be criticised, not only because it would reduce total food supplies, but also because it would, in general, fail to benefit the home farmer.

The underlying theory of import restriction by tariffs or by quotas is that a reduction of imports would raise the prices of British farm produce. There are, however, three reasons why this policy is unsound in principle. The imported product is not often directly competitive with the British product, either in price or in the time of year at which it comes on the market. British butter is about 4d. per lb. dearer than imported; a reduced supply of the cheaper butter will not increase the incomes of the bulk of consumers to enable them to buy more of the dearer product; consumers' purchasing power will be diverted not to British butter but to margarine. A restriction of chilled beef supplies from the Argentine does not increase the demand for, and raise the price of, British beef, but drives the housewife to buy cheaper foods. Similarly a restriction of the supply of certain fruits and vegetables from the Continent does not raise the price which the British farmer obtains for his produce since there is little, if any, of the latter on the market at the time French cherries or Spanish early potatoes are coming in. Every rise in the price of imported food, when due to restricted supplies, makes it more difficult for the housewife to "buy British." The expansion of British farming is more dependent on cheap rather than dear food imports.

The second possible source of higher prices for the farmer is through a reduction in distribution costs. It would take too much time to enter into a discussion on such a controversial subject as the alleged wastes and redundancies

in the marketing system or to attempt to estimate the possible economies to be achieved by re-organisation. The tendency to-day is to overestimate them; even if there were savings, the re-organisation must be slow and there is no guarantee that the savings would acrue to the farmer through higher prices for his produce.

It is generally conceded that the present organisation of milk distribution provides greatest scope for economies, particularly through a reduction in the number of distributors. In Oxford, for example, three-quarters of the milk is delivered by 10 per cent. of the existing dairymen and it is difficult to believe that nine times as many are necessary to deliver the remaining quarter. Estimates vary as to the economies that might be achieved by rationalisation whether carried out by the trade, by Co-operative Societies, by municipalities, or by the State itself. The most optimistic expect a saving of about 4d. per gallon, or ½d. per pint, a reduction in price which has been shown to have an insignificant effect on consumption.

The third possibility of raising farmers' returns is by increasing the demand for protective foods. If the purchasing power of industrial and urban populations is increased, then automatically there will be an increased demand for protective foods. It is due to the high degree of industrial efficiency that the present level of food consumption is as high as it is. Any factor which handicaps industrial development must inevitably lower industrial standards of living and the purchasing power of the lower income groups for these beneficial foods.

Demand for protective foods does not, however, depend entirely on prices and incomes; there is still a great deal of indifference to and ignorance of the nutritional values of such foods as milk, fruits and vegetables, which can be cured only by education and propaganda. Even amongst the lowest income groups there are great differences in household food habits which are not due to differences in prices or incomes.

A recent survey of milk consumption in different areas in England and Wales has brought out these variations in food habits. At Crook, in Durham, milk consumption per head averaged about ½ pint per day, while at King's Lynn, where the price was the same and the average income per head was very similar, people consumed as much as 70 per cent. more milk. Similarly, Poplar and Salisbury had similar average incomes and similar milk prices, yet milk consumption in the latter was 66 per cent. greater than in the former.

Coming to individual towns, the variations in milk consumption between one household and another, even among similar income groups, were amazingly great, particularly among the poorer classes. Figures for Crook, for example, show that households in the same income group differed in the amounts spent weekly on milk from ½d. per head in some houses to 1s. per head in others, 24 times as much.

Unfortunately, these factors, such as reduced marketing costs, rising purchasing power in the cities, education of the consumer and so on, have, like those for reducing production costs, only slow and gradual effects in bringing about a greater output and consumption of protective foods. For immediate results, some temporary means must be found to bridge the gap between the price that must be paid to induce the farmer to produce more protective foods and the price which the consumer can afford to pay. This could be done by the careful provision of subsidies to consumers or producers. The relative merits of these alternative methods will doubtless be discussed later, but it must be realised that the funds for such payments should be obtained from the Exchequer and not by tariffs or levies on food stuffs.* The latter might only defeat their purpose by raising the prices of cheaper foods to such an extent as to reduce the consumption of the dearer protective foods. Lord Astor has suggested that such a policy need not involve an increase in the total contributions by the Exchequer but merely a re-direction of the existing payments.

In summary, it is evident that British farming is already playing an important part in providing those protective foods which are so necessary for the improvement of nutrition. The production of these foods has developed in response to natural economic conditions; from the middle of the nineteenth century until eight years ago, British farmers had gradually adapted their system of farming to meet the flood of cheap imports from overseas and the demand for dearer foods by a rapidly increasing industrial population at their door.

These dearer foods produced by the home-farmer are, in general, those now classified as protective and it is particularly fortunate that the type of production which is desired for national health purposes conforms so closely to the "natural" development of British farming, since their production can be stimulated at relatively small cost.

While adapting his output to changing market demands, the home farmer has, at the same time, achieved some remarkable reductions in production costs by a more economical use of

*Under a monopoly system, differential prices might be used under certain circumstances to increase consumption among lower income groups at the expense of higher income groups whose demand is likely to be little affected by higher prices.

the land, capital and, in particular, of labour. In the last 15 years, the output per person employed in farming has risen by 40 per cent., a rate of progress that has been surpassed by few industries and which has enabled the British farmer to hold his own against overseas supplies even when produced by workers with much lower standards of living.

In spite of the big increase in both home-produced and imported supplies of these protective foods, it is clear that there is still an insufficiency of protective foods. There is still a gap for some people between the market price of these foods and the price that they are able to pay. This gap can be closed only by reducing still further the costs of production or by increasing consumers' purchasing power or by both.

While technical efficiency has increased rapidly in recent years, it is doubtful whether this rate can be raised sufficiently rapidly to bring about an immediate relative increase in output. Even though there are many improvements possible in methods of production at the present time an increased output of protective foods by the reducing of production costs must, at best, be a slow process and it is on the demand or price side that a more rapid stimulus can be applied. Of the various possible methods, it would appear that some form of subsidy paid by the Exchequer, to either the producer or the consumer, would be the most effective means of attaining the objectives of a nutrition policy until such time as the various improvements in productive efficiency may be brought into practice or until incomes and education rise to such a level that everyone is assured of an adequate diet.

It must not be forgotten, however, that the stimulation of home production can never do away with the necessity of imports if an all-the-year-round supply of protective foods is to be assured at reasonable prices.

One further point—many producers are sensitive about receiving subsidies. This may be reasonable in regard to such a subsidy as that given to sugar which is of relatively little value to the community as a whole but there can be no stigma attached to a subsidy devoted to the increased output of protective foods. The provision of adequate diets must eventually take its place with the other social services, medical attention, dental treatment, unemployment insurance, housing and so on; in fact, there may be sound arguments for giving nutrition a prior claim on available funds. There could be no more stigma attached to payments to farmers for protective foods than to the salaries paid to school teachers. The community should contribute where it receives the benefits.

(*To be continued.*)

Great Yarmouth

Meeting Place for N.V.M.A. Congress, 1939

[Contributed]

Great Yarmouth is situated almost at the most extreme Eastern point of the British Isles stretching out to the North Sea. It is an ideal centre for seeing something of East Anglia with its waterways, beautiful country and its old-world villages, while the town itself provides a background of ancient buildings, quaint narrow streets and odd corners.

Its ancient history can be traced back to the days of the Roman occupation. It was an important centre in the Saxon days and its charter of incorporation dates back to the reign of King John. In bygone days it was customary to hold a free fair in Great Yarmouth and there was a time when this was the only occasion on which foreigners were allowed to visit the town. But that was over eight centuries ago and since then many foreigners have visited Great Yarmouth and left impressions of their visits, particularly the Dutch, whose influences are noticed in some of the architectural features.

For many centuries Great Yarmouth was one of the most important sea-ports in England, ships from all over the world unloading their cargoes here, and it is still an important sea-port. During the winter months it is famous as the centre of the fishing industry, the activities of which add to the quaintness and charm of the town. David Copperfield was reminded of this when he "smelt the fish and pitch and oakum and tallow and saw the sailors walking about"—so will you be when you approach the wharves and get the fascinating atmosphere which those who live in towns always associate with the sea and sea-going ships.

Great Yarmouth is an ideal centre for motorists — Norwich, Cromer, Sandringham, King's Lynn and other historical places being

Britannia Pier and Marine Parade

within easy motoring distance. As for water trips, the well-known Norfolk Broads are close to the town and a visit to them has been arranged in connection with the Congress. It will include a motor tour covering some of the most attractive country together with a trip on the principal waterways by motor launch. In short, a most excellent itinerary has been arranged.

No doubt some delegates will prefer to stay at Gorleston-on-Sea, which is very close to Great Yarmouth and separated from it by the River Yare. In contrast to Great Yarmouth the town is situated on low cliffs which descend gently to the beach. Although much smaller than Great Yarmouth it has many attractions and almost any recreation can be pursued. Immediately behind Gorleston are several old-world villages, some of which are associated with the Roman occupation. For those who like walking the district offers ample opportunities for rambling in the pleasant surrounding countryside.

Let those who are in doubt as to whether they will like the district remember the impressions of Mr. S. P. B. Mais:—

"I very soon found what Norfolk is like. It is an undulating well-wooded, well-tilled land of red-brick farms and big ploughs. Each red-brick village has a grey flint fifteenth-century church, and a large park full of trees, in the middle of which stands a Tudor or Jacobean manor or castle.

The Flemish weavers who, in the fourteenth century, brought such prosperity to Norwich, also brought prosperity to the countryside. In those days it must have been even richer than the Cotswolds. It is not poor now. I passed flock after flock of long-fleeced sheep and many sturdy cattle. The blue wagons were so heavily weighed down under their bags of flour that they all had three horses to draw them. Ploughmen were busy in the fields everywhere, and the gulls were busy in the wake of the plough."

—From *This Unknown Island.*

An excellent booklet containing further information regarding the district can be obtained from Mr. Louis Rump, Great Yarmouth and Gorleston-on-Sea Publicity Department, Town Hall, Great Yarmouth, Norfolk.

A resolution asking the Ministry of Agriculture to institute schemes or methods for the control and eradication of contagious abortion and streptococcic mastitis was confirmed at the recently held annual meeting of the British Dairy Farmers' Association in London. Major G. Miller Mundy, President, reported that the resolution had been passed by the council and sent to the Ministry of Agriculture. The council, said the President, regarded the two diseases as causes of loss to dairy farmers equal to, if not more serious than, tuberculosis.

The Veterinary Record

June 3rd, 1939.

National Conference on Nutrition

As readers will see by our columns this week we reprint the first of a series of papers which were presented at a conference on human nutrition at which representatives of the medical profession, agriculture, social services, education, etc., took part. Representatives from a very large number of different bodies attended and participated in the discussion. The conference was organised by the British Medical Association, and the Council of this—our counterpart in human medicine—are to be warmly congratulated for their initiative and foresight in calling the conference.

We commend to our readers the papers which were read: they will well repay the time spent in their perusal. Those which are perhaps of more particular interest to the veterinarian are those which discussed means of stimulating home production, the first two of which we reprint in this issue. We would advise those who wish to study the proceedings in more detail to purchase the volume in which they will be published in full by the British Medical Association in the near future.

Some years ago at a meeting of the British Association for the Advancement of Science. there was coined the slogan: "The Marriage of Agriculture and Medicine will increase human health." The more popular Press even suggested that the "marriage had been arranged." Whether the marriage actually took place is not very clear. No lusty offspring from the union has been introduced to the public, but at least one rather undersized infant, which is now happily growing into adolescence, was produced, and another appears to have been still-born.

The veterinary profession has a real interest in the living infant—the Milk-in-Schools Scheme—which is well on to its feet and gives promise of developing into one of whom its parents should be proud. Some mourn the still-born child—the scheme for the pasteurisation of milk; others are really glad that it died last February. It was killed by the action of one of its parents; the other was eager for its survival. Since its death some degree of coolness has been evident between these parents: it may

be that the British Medical Association is destined to play the part of a mediator by arranging such conferences as that to which we refer.

There can be no doubt that medicine (in the widest sense) and agriculture, have each a mutually complementary part to play in providing the means which will lead to an improvement in human health. Medicine must point the way, suggesting what foods are needed in greater abundance or of better quality, wherein the ordinary dietary is lacking—or is taken in excess—and agriculture will produce the foodstuffs. It is one of the almost unique characteristics of British agriculture that, thanks largely to our remarkable soil and no less remarkable climate, it is possessed of a degree of flexibility which can accommodate almost any demand made, provided it is economically advantageous. The problems immediately pressing are not so much those of production but rather of distribution, economics and overseas competition.

For the moment, however, we must leave others to wrestle with these complicated matters. The veterinarian's part is a precise one: he is concerned with the problems of animal production and they themselves are by no means easy.

H.M. STATIONERY OFFICE PUBLICATIONS

The undermentioned has been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office, at the following addresses: London: Adastral House, Kingsway, W.C.2, and 28, Abingdon Street, S.W.1; Cardiff: 1, St. Andrew's Crescent; Manchester: York Street; Edinburgh: 120, George Street.

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The Lieutenant-Governor of South Australia has opened the Institute of Medical and Veterinary Science at Adelaide, the first of its kind in the Southern Hemisphere. The Director is Professor Weston Hurst, formerly of London and Birmingham Universities.

CLINICAL COMMUNICATION

A Case of Intussusception Necessitating Enterectomy

N. R. TURNBULL, M.R.C.V.S.
BASINGSTOKE

SUBJECT.—Wire terrier bitch; aged nine months.

HISTORY.—The bitch had been treated about a week before for simple diarrhoea which was unaccompanied with fever and had responded to a simple bismuth mixture.

On the morning in question, December 11th, 1938, the owner rang up and said that while the bitch was defaecating that morning he noticed she was straining heavily and a "lump" had appeared at the anus. He pushed the "lump" back. She had refused food that morning.

EXAMINATION.—On examination about half an hour later the temperature was 102° F., the bitch was straining and on abdominal palpation a sausage-shaped mass was felt. The dog resented palpation.

DIAGNOSIS.—Intussusception.

TREATMENT.—Immediate operation.

OPERATION.—The bitch was anaesthetised with nembutal intravenously. Adopting the usual aseptic technique, a mid-line incision was made and the abdomen explored.

(i) *Excision of Diseased Portion.* — The sausage-shaped mass was located and drawn out of the wound. It was found to consist of an intussusception of about six inches of ileum into colon.

Attempts were made to reduce the condition by manipulation, and during the process a very "deflated" caecum appeared. When there was about one-and-a-half inches still invaginated the bowel split through all coats and it was decided to excise this portion. The contents of the bowel were pressed back for about one inch on either side of the diseased part and the bowel clamped with bowel clamps at those points. The mesenteric vessels to the area were traced and ligated. The diseased portion was then excised and the two open ends of the bowel were swabbed out with sterile water. The mesentery on the proximal portion was removed for about one inch.

(ii) *Repair of the Bowel.* — End-to-end anastomosis was decided upon. The proximal end of the intestine was run into the distal portion and sutured as shown in the diagram (*overleaf*). The union was then peritonised and returned to the abdomen. The suture material used was very fine silk. Sutures marked "A" passed through only the serosa and musculosa of

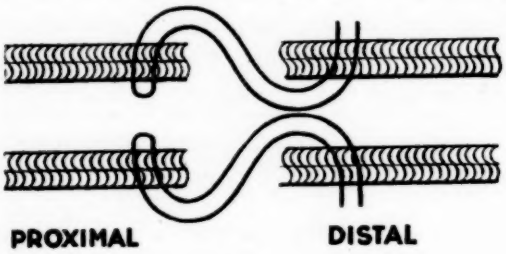

FIG. 1
METHOD of SUTURING 1ST STAGE

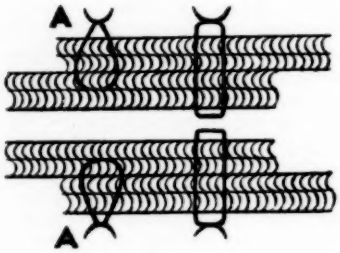

FIG. 2
METHOD of SUTURING 2ND STAGE

(*Note.*—The sutures were, of course, inserted in a plane at right angles to the long axis of the bowel.)

the proximal portion. The laparotomy wound was closed by three layers of interrupted sutures.

Post-Operation Treatment. — Temperature rose to 104° F. that evening and 50 c.c. normal saline was given subcutaneously.

December 12th, 1938.—Normal recovery from nembutal. Bitch bright. Micturition normal. A little glucose and water given.

5.45 p.m.—Liquid faeces containing a little blood passed.

December 13th, 1938.—Temperature 102° F. Frequent passage of fluid offensive faeces. Bitch bright and took a little milk and water voluntarily and readily.

December 14th, 1938.—Temperature 102° F. Faeces not so fluid. Abdominal wound healing well. Teaspoonful liquid paraffin given.

December 15th, 1938.—Temperature 102° F. Regular passage of faeces. Bright and taking milk, glucose and water and frequent small amounts of liquid paraffin.

December 16th, 1938.—Temperature 102° F. Evacuation normal. Brand's essence and milk taken. Wound weeping slightly and slight inflammation of right posterior mammary gland.

December 17th, 1938.—Removed sutures, some sepsis which cleared rapidly. Feeding well.

From this point recovery was uninterrupted and uneventful.

On February 22nd, 1939, a barium meal was given and the bitch was screened. No evidence of stricture or kinking was to be seen.

REVIEW

[Cattle Fodder and Human Nutrition. By A. I. Virtanen (Professor at the Biochemical Institute, Helsinki, Finland). Published by Cambridge University Press. 7s. 6d. net.]

This book gives in connected form four lectures which Professor Virtanen gave in this country towards the end of 1937. They range over a wide field and would not have appeared to be so intimately inter-connected had it not been for the mode of presentation adopted by the author.

In the first two chapters the process of nitrogen fixation in the soil is described and discussed, the author's own valuable experiments being given in detail. His conclusion that the nitrogen-fixing bacteria of the root nodules of legumes take carbonaceous matter in the form of oxalacetic acid from the plant and convert this via the oxime into aspartic acid, which is then utilised by the plant again, seems amply supported by experiment. The soil gains in nitrogen because the legume uses only a portion of aspartic acid formed, the rest being excreted into the environment of the nodules.

Considerable attention is also given to symbiosis between legumes and non-leguminous plants, especially to associated growths of clover and grasses, which often constitute the most valuable part of the vegetation of meadows and pastures.

The third chapter is devoted to a survey of the food of representative human families in Finland, and from this it is clearly shown that the normal dietary of poor people in this country depends largely upon milk and dairy produce for adequate supplies of certain of the vitamins, especially vitamins A and D. In the summer these sources are adequate but winter milk is deficient in these vitamins.

A method of preparation and storage of fodder for cattle is developed, so that they may receive ample vitamins in their diet during winter and that these may be passed on to human beings in the milk. The method consists essentially in preparing ensilage from mixtures of grass and clover cut young whilst they still contain large amounts of carotene and other valuable nutrients, making the herbage acid to between *p*H 3·0 and *p*H 4·0, and storing in a

silo for several months. It is claimed that ensilage prepared by this A.I.V. process keeps better and results in far less loss of nutrient materials than ensilage prepared in the ordinary way without the addition of acid.

In this way a connected story is developed which shows how the better nutrition of the human population of Finland is dependent upon the nutritive value of cow's milk, and how this is kept up to standard in winter by the preparation of ensilage from young clover and grass by the A.I.V. method. The desired nutritive quality of these plants is dependent upon the process of nitrogen fixation by the clover and its associated bacteria, and the excess nitrogen compounds formed by this collaboration are utilised by the grasses.

The book is most interesting and the A.I.V. method of preparation of fodder for cattle may become important in this country, especially if the great claims made for it by Virtanen are substantiated. Thus the author states, "the process is therefore of the greatest importance in self-supporting milk production, as it makes it possible to preserve high-protein plants at an immature stage when their protein and vitamin contents are high and their digestibility is good. This means a complete change in forage production generally, and particularly so in grassland practice, as the grasslands may now be cut several times per season so that immature, well-digested and vitamin-rich feeds can be preserved for cattle." The process may thus greatly diminish the cattle cake bill to the farmer, and it is certainly one which the veterinary surgeon should know about: this book gives him the experimental basis for the high claims made.

GLUCOSE EXCRETION IN DIABETIC DOGS

"P. Govaerts and P. Muller (*J. Clin. Invest.* **18**. 25. 1939) have investigated the excretion of glucose and creatinine in dogs made diabetic by pancreatectomy. The creatinine clearance being considered as a measure of the glomerular filtration and the glucose concentration of the arterial plasma as equal to the concentration of this substance in the glomerular filtrate, the quantity of glucose which the tabular cells reabsorbed from 1 c.c. of glomerular filtrate could be calculated. This figure was called the 'threshold.' When the blood-sugar concentration increased moderately, this threshold increased, and with further elevation soon reached a maximal value which remained constant for any higher level of glycaemia. In the diabetic dog at high levels of hyperglycaemia, a constant part of the filtered glucose saturated the reabsorptive power of the tubular cells, and the remainder was completely excreted as in a phlorizinized dog. These characteristics of the renal function did not change appreciably in the diabetic dogs during a period of observation lasting several months." —*Nature*, March 25th.

ABSTRACTS

[Virus Abortion in the Mare. Hupbauer, A. (1938.) *Deuts. tierärztl. Wschr.* **47**. 745-8.]

Hupbauer describes an outbreak of abortion in a well-known stud in Czechoslovakia in which, during a period of four years, 40 to 70 mares aborted between three and ten months. *S. abortus equi* was found in seven cases and diplococci and streptococci in others. During this period, despite the use of a paratyphoid vaccine, an acute outbreak occurred and Hupbauer was led to look for another cause. Accordingly emulsions of organs from aborted foetuses were filtered through a Seitz E-K filter and when injected into pregnant guinea-pigs produced abortion in 13 out of 24 and in two rabbits and three mares.

The outbreak appears to have been similar to those described by Dimock and Edwards in the U.S.A. and Sedelmeier in Munich, the former demonstrating the presence of a filterable agent.

Reference is made to the bacteriological examination of 525 aborted foetuses in which a variety of organisms was found (paratyphoid organisms 147 times, Streptococci 86, bi-polars 33, *B. coli* 25, etc.), but apart from the first group it is considered that these are probably secondary invaders which appear when the severity of the disease has lessened.

Apart from a little uneasiness the mare shows no symptoms prior to abortion. In the aborted foetus one may find at *post-mortem* examination fluid in the abdominal and thoracic cavities, marked petechiation of the serous membranes, enlarged spleen and fine whitish nodules in the liver.

N. S. B.

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[Cottonseed Poisoning of Pigs. Binns, H. R. (1938.) *J. Comp. Path. and Therap.* **51**. 4. 296-304.]

Pigs are particularly susceptible to the toxic action of cottonseed and the meals and cakes derived from it. The majority of writers on the subject agree that the toxic principle is gossypol. There is evidence to show that certain dietary constituents diminish the toxicity of cottonseed, *e.g.*, protein, iron and calcium.

Binns records an outbreak of cottonseed poisoning in a herd of Large Black pigs in Nyasaland. The diet of the pigs is stated to have been deficient in protein and minerals, particularly Ca and Fe, the principal item being maize. Cottonseed to the amount of about 25 per cent. of the total ration was fed for approximately two weeks. During the fifth week after the beginning of feeding the cottonseed 14 out of 23 pigs aged four to six months

died of peracute poisoning; three adult pigs showed mild transient symptoms. The symptoms described are acute respiratory distress and convulsions, death occurring within half an hour of the onset of symptoms. The most important lesions found on *post-mortem* examination were: diffuse swelling and catarrhal inflammation of the gastric mucosa; catarrhal and patchy haemorrhagic inflammation throughout the small intestines; mesenteric lymph glands enlarged and congested; kidneys swollen and haemorrhagic; effusion in pleural cavity; trachea filled with a large quantity of frothy blood-stained fluid; congestion and oedema of lungs; heart enlarged and flabby. These findings are very similar to those described for East African swine fever but this disease was eliminated by inoculation experiments.

It is concluded that since the lesions described here are essentially similar to those described for poisoning caused by cottonseed cakes and meals, the toxic agent is present in the raw seed and is not a toxic substance arising from the solvents used to extract the oil or decomposition products in the cakes.

N. J. S.

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[Air-borne Infection. Editorial. *Amer. J. Pub. Hlth.* **28.** 2. 195-197. (Four refs.).]

The work on the importance of the air as a vehicle of infection is summarised. A number of common beliefs are refuted. Direct evidence of air-borne infection is lacking on the whole, and direct contact is generally of much greater moment. Recent research, however, has shown that droplet infection, which is in itself essentially local and confined, can by splitting of the droplets to nuclei be extended to great distances, and the generally admitted fact that nasopharyngeal infection is universal is in itself significant.

D. D. O.

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[Sanitary Aspects of Air Conditioning. Yaglou, C. P. *Amer. J. Pub. Hlth.* **28.** 2. 143-147.]

The paper summarises the comfort, health, and therapeutic aspects of air conditioning in the light of present knowledge, and current research.

The value of air conditioning in the treatment of disease is stressed. Conditioned air is a necessity in operating theatres, and reduces the likelihood of respiratory and gastro-intestinal disease. Asthma and similar conditions are given temporary relief by conditioned air, and summer pyrexias, enteric disorders, heat stroke, heart failure, and many other disorders are benefited by air cooling. The sterilisation of air by ultra-violet light is one of the latest phases of air conditioning.

D. D. O.

THE NATIONAL VETERINARY BENEVOLENT AND MUTUAL DEFENCE SOCIETY

ANNUAL MEETING AT MANCHESTER

The annual general meeting was held at 15, New Bridge Street, Manchester, on Wednesday, May 3rd, 1939, at 3 p.m.

The President (Mr. W. Woods, of Wigan), occupied the Chair, and there were also present: Messrs. G. H. Locke, E. H. Curbishley, G. Mayall, J. Holroyd, A. H. Watson, F. Hopkin (Hon. Treasurer) and R. C. Locke (Hon. Secretary).

The Hon. Secretary read apologies for unavoidable absence from Sir F. T. G. Hobday, Messrs. H. W. Dawes, J. H. Wright, W. Jackson Young and P. Wilson.

The minutes of the previous annual general meeting, having been published in the *Veterinary Record*, were taken as read.

Election of Officers for 1939

The following were elected:—

President.—W. Woods, Wigan.

Vice-President.—J. Clarkson, Ravenscar.

Hon. Secretary.—R. C. Locke, Manchester.

Hon. Treasurer.—F. Hopkin, Manchester.

Council.—Messrs. A. J. Wright, Macclesfield; J. Holroyd, Blackburn; J. H. Wright, Manchester; E. H. Curbishley, Alderley Edge; D. Imrie, Glasgow; G. H. Locke, Manchester; H. Sumner, Liverpool; F. L. Gooch, Stamford; W. Shipley, Great Yarmouth; G. Mayall, Bolton; A. Cornish Bowden, Beckenham; O. V. Gunning, Tutbury; W. K. Townson, Peterborough; H. W. Dawes, West Bromwich; W. D. Rees, Glamorgan; R. Barons Nelder, Exeter; A. H. Watson, Bradford; and Sir F. T. G. Hobday, London.

Auditors.—J. Adamson (Honorary), and Messrs. Litton, Pownall, Blakey and Higson.

Financial Report

In giving the financial report for 1938, the Hon. Treasurer said that the finances of the Society were in a very satisfactory condition. Practically all the income from investments had been paid in grants to beneficiaries, but there had been £131 received from donations and an amount of £97 reclaimed income tax. These sums would be invested and would help to offset the reductions in interest from investments with which the Society was faced. The number of beneficiaries was reduced at present, but there was a new application before the Council at the moment and Mr. Hopkin thought there would certainly be others very soon.

From the defence side of the Society's

activities the year had been a very busy one, but the cost to the Defence Fund had been remarkably small, and the Hon. Treasurer thought this was a tribute to the manner in which the various cases were fought. He was glad to say that the membership had again shown a slight increase, and he hoped that a similar or greater increase would be accomplished in 1939. The financial statement was approved and adopted unanimously.

Mr. G. H. Locke raised the question of the advisability of the Society becoming incorporated. He thought the cost incurred would be well repaid by the easier working which would result for the Trustees when dealing with investments, repayments, etc., or when Trusteeships or other offices became vacant. In view of the fact that nothing could be done for twelve months, as it would be necessary to make alterations in the rules of the Society, it was decided to discuss the matter further at a later date.

The meeting concluded with a vote of thanks to the President.

R. C. Locke, *Hon. Secretary.*

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Defence Cases

1. Counter-claim against member alleging negligent treatment of cat. Society defended. Judgment given for member. Society paid balance of costs.

2. Counter-claim against member alleging negligence in treatment of greyhound. Society supported member. Claim withdrawn and professional fees paid.

3. Action threatened against member for alleged negligent treatment of cow. Society supported member. No further development.

4. Action threated against member for negligence. Advice given. No further development.

5. Threatened claim against member following death of pony under anaesthetic. Society supported member. Claim not proceeded with.

6. Threatened claim against member following death of cow after milk-fever. Society supported member. Amicable settlement made. Society paid member's expenses.

7. Threatened claim against member following death of thoroughbred. Society supported member. No further development.

8. Counter-claim against member alleging negligent treatment of dog. Society supported member. Case settled amicably.

9. Threatened claim against member following death of dog. Society gave advice. Case proceeding.

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Benevolent Cases

M.J. 88. Widow, £2 per month.
L.H. —. Four children, £4 per month.

N.V.M.A. DIVISIONAL REPORTS

South Wales Division N.V.M.A.*

MEETING AT CARMARTHEN

A General Meeting of the South Wales Veterinary Association was held at the Ivy Bush Hotel, Carmarthen, on March 10th, 1939.

The following were present: The President, J. Stanley Pike, Esq., in the chair, Messrs. C. Watson, R. Moore, A. F. Good, A. E. Ferguson, J. E. Thomas, H. M. Duff, A. F. Butler, F. Mullane, W. G. S. Angus, A. C. Howse, A. J. Cattell, G. Thos. Cattell, A. T. Morgan, W. Davies, W. J. Davies, P. Macgregor, D. J. Macaulay, P. O. O'Neil, R. J. Thomas, D. K. Bryson, A. D. J. Brennan, T. H. Jones, J. Campbell Hill, D. H. Thomas, R. McNeil, F. V. John, Dr. G. B. Brook, Messrs. D. E. Pugh, J. F. Rees, W. D. John and J. W. Simpson.

Messrs. D. S. Campbell, P. A. Matthew, C. S. Drought, A. D. F. Good, and Capt. Norman Bisset were present as visitors.

On the proposition of Mr. T. H. Jones, seconded by Mr. R. Moore, the minutes of the last meeting were taken as read.

It was proposed by Mr. A. F. Good and seconded by Mr. G. Thos. Cattell that the Rules of the Association were to be printed and circulated to all the members.

Appointment of Officers

Mr. J. Stanley Pike proposed Mr. A. D. J. Brennan to be the President. This was seconded by Mr. A. F. Good and carried unanimously.

Mr. T. H. Jones was proposed as Secretary and Treasurer by Mr. J. Stanley Pike. This was seconded by Mr. A. Parry and carried unanimously.

The following were appointed as members of the Council: Messrs. C. Watson, W. D. John, D. E. Pugh, W. Davies, H. M. Duff, G. Thos. Cattell, J. Campbell Hill, A. F. Butler, J. Stanley Pike and J. F. Rees.

*Received for publication April 4th, 1939.

M.D. 65. Widow, £3 10s. 0d. per month.
E.B.C. 56. Widow, £2 per month.
M.A. 43. Widow, £2 10s. 0d. per month.
M.B.B. 75. Daughter, £2 per month.
E.M. 74. Widow, £1 per month.
A.J.P. 67. Widow, £2 per month.
L.M.R. 43. Widow, £4 per month.
E.H. 61. Widow, Grant of £52.
P.V. M.R.C.V.S. £2 per month.

Mr. Brennan then took the chair. In a few remarks he thanked the members for the honour of being their President. Mr. Brennan emphasised the fact that it was the duty of everyone to do his utmost to be present at all meetings, and assured the members that he would do all he could to make the Association a success, but that he must rely on their co-operation.

It was proposed by Mr. Pike and seconded by Mr. Watson that the Association's banking account should be transferred to the Llandilo Midland Bank.

Mr. T. Roger Thomas and Mr. A. J. Cattell were nominated as representatives of the Division to the N.V.M.A.

P.D.S.A.—After some discussion it was proposed by Mr. Hill and seconded by Mr. Pike that a special meeting of the Council should be called to consider the matter in detail before making any recommendation.

Loveday Report.—Several members spoke for and against this report. It was ultimately agreed on the proposition of Dr. Brook and seconded by Mr. G. Thos. Cattell to defer discussion until after the Welsh Branch Meeting at Cardiff on March 17th.

Address.—Capt. Norman Bissett then gave a very informative address on "Some Aspects of Parasitic Disease Investigation." He said that the subject of parasitic diseases was very interesting, but that it might appeal more to the practitioners if the nomenclature of the parasites was stabilised. As far as field work was concerned a great saving of time would be effected if a microscope formed part of the permanent equipment of the practitioners' car, while Sheather's concentration method of detecting ova in faeces could be carried out in the surgery. Dr. Sheather's method was described in detail.

Special attention was paid to parasitic gastro-enteritis in sheep and cattle, and the copper sulphate-nicotine sulphate method of treatment was described, special emphasis being laid on the narrow limit between safety and toxicity and the necessity therefore of accurate dosage. A syringe specially devised by the speaker for dosing sheep was exhibited.

Capt. Bisset also said a few words on the sheep nostril fly, husk in cattle, coccidia and lung worms in pigs.

There was no discussion, because the hour was getting late.

The President thanked Capt. Bisset very warmly for the address, which was of great interest and much appreciated.

The members afterwards had tea, which was kindly given by Mr. J. Stanley Pike, Mr. J. Campbell Hill and Mr. J. F. Rees.

T. H. Jones, *Hon. Secretary.*

Dumfries and Galloway V.M.A.*

SPECIAL MEETING AT DUMFRIES

A special meeting of the above Society was held at Gracefield, Edinburgh Road, Dumfries, on Tuesday, May 16th, 1939.

The President, Mr. A. S. Ferguson, occupied the Chair, and the following members were present: Messrs. Baird, Fleming, Gordon, Hewetson, Ireland, Kerr, Macmillan, McKinnon, Young, and the Hon. Secretary (G. A. Sangster).

An apology for absence was received from Mr. G. D. W. Davidson, Castle Douglas.

The minutes of the last meeting were approved.

Business

(1) To deal with a request of the N.V.M.A. for the purpose of "Air Raid Precautions (Animals) Service."

(2) Correspondence from the N.V.M.A. regarding the purchase by clients of remedies for the treatment or cure of contagious abortion and sterility in cattle.

(3) Arrangements with the Royal Society for the Prevention of Cruelty to Animals and the Scottish Society for the Prevention of Cruelty to Animals regarding the free treatment of the animals of the poor.

(4) Arrangements for summer meeting.

(5) Other business.

(1) The Secretary was instructed to get in touch with the officer in charge of the various local A.R.P. Committees in the area of this Society.

(2) The Secretary is to circularise all members of the Society and ask them if they can provide evidence of the nature required, and if so to get in touch with the General Secretary.

(3) This scheme was approved and it was hoped that a similar arrangement would be made with the People's Dispensary for Sick Animals of the Poor.

(4) It was proposed to hold the summer meeting at the Lockerbie House Hotel on June 13th. The President and Secretary were left to carry out the arrangements.

(5) Mr. W. A. Ireland was proposed as a member of the Society by the President and seconded by Mr. Gordon.

An appeal was made by the President on behalf of the Victoria Veterinary Benevolent Fund.

At the close of the meeting the President was accorded a vote of thanks.

G. A. Sangster, *Hon. Secretary.*

*Received for publication May 22nd, 1939.

In Parliament

Patent Medicine Duties

Formally moving the second reading of the Finance Bill in the House of Commons on May 25th, Sir John Simon, dealing with the proposal to repeal the medicine stamp duties, said that the Select Committee which had carefully examined the question were entirely of the view that the present archaic scheme of taxation should be repealed, and had suggested something which should take its place. Naturally he would have preferred to lose no revenue at all. But while he realised that the present duties could not be maintained for the reason that they were unworkable — and the Treasury were challenged whether they were working them lawfully, and he was advised that it would be impossible to say that they were being worked lawfully as a practicable scheme—the view of his advisers was that the alternative scheme suggested, though worked out so diligently by the Select Committee, was not really a practicable, watertight scheme. When they came to discuss the clause he could show very good reasons for it. He did not think that the proper way to deal with quack medicines, even if they could identify them by this sort of process of charging a small tax on those which were sold. It was essentially a matter for control and regulation by the law of public health.

He had been asked if there was not fear that by the repeal of the duties they would be doing something detrimental to the public health. In reply he called attention to an answer given on behalf of the Minister of Health on Tuesday to the effect that the Minister did not think that the repeal could have any adverse effect on the health of the nation. That corresponded to his own information, and a witness, he thought from the British Medical Council, expressed the same opinion before the Committee.

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The following questions and answers have been recorded in the House of Commons recently:—

Patent Medicines

Sir R. Glyn asked the Minister of Health whether he is satisfied that the proposal in the Finance Bill to repeal the tax on proprietary medicines is in the interest of the health of the nation; and what steps he proposes to take in order to exercise control of the sale of secret remedies, as, if the repeal be effected, there will be no incentive or necessity for makers to disclose the formulae of such remedies, nor any restriction, other than that imposed by the Poisons and Pharmacy Act, upon their recommendation and sale by all and sundry?

Mr. Bernays: As regards the first part of the question my right hon. Friend does not think that the repeal of the Medicine Stamp Duty should have any adverse effect on the health of the nation. As regards the second part, the question whether any further control should be imposed on the sale or advertisement of proprietary medicines is engaging my right hon. Friend's attention but he cannot undertake to introduce legislation in the matter at the present time.

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Horses and Mules

Mr. G. Braithwaite asked the Secretary of State for War whether he will state the percentage of horses and mules, respectively, belonging to the Army at home, which were cast from the Service, apart from those destroyed for veterinary reasons, during each of the financial years, 1935-36, 1936-37 and 1937-38?

Mr. Hore-Belisha: The percentages are as follow:—

Financial year	Horses Per cent.	Mules Per cent.
1935-36	7·43	82·54
1936-37	25·13	68·97
1937-38	42·83	40·00

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

June 5th.—Meeting of the Editorial Committee, N.V.M.A., 36, Gordon Square, W.C.1, 4 p.m.

June 7th.—Meeting of the Western Counties Division, N.V.M.A., at Plymouth, 2 p.m.

June 8th.—Meeting of the Lincolnshire and District Division, N.V.M.A., at Peterborough, 2.30 p.m.

June 9th.—Meeting of the South Wales Division, N.V.M.A., at Aberystwith, 2.30 p.m.

June 12th.—D.V.S.M. Examination begins.

June 14th.—Meeting of the Lancashire Division, N.V.M.A., at Crewe, 2 p.m., to be followed by annual summer meeting at the Cheshire School of Agriculture, Reaseheath, nr. Nantwich.

June 19th.—N.V.M.A. Committee Meetings, Royal (Dick) Veterinary College, Edinburgh.

June 20th.—N.V.M.A. Committees and **Council** Meeting, Royal (Dick) Veterinary College, Edinburgh.

June 20th.—R.C.V.S. Committee Meetings.

June 21st.—R.C.V.S. Committee Meetings.

June 21st.—**R.C.V.S. Annual Dinner.**

June 22nd.—R.C.V.S. Committee Meetings.

June 23rd.—R.C.V.S., Committee and **Council** Meetings.

June 30th and July 1st.—R.C.V.S. Written Examinations.

July 23rd—28th.—N.V.M.A. Congress at Great Yarmouth and Gorleston-on-Sea.

R.C.V.S. COUNCIL ELECTION RESULT

The following result of the Royal College of Veterinary Surgeons Council Election was declared at the annual meeting of the Royal College, held at 10, Red Lion Square, London, W.C.1, on Thursday last.

Name	*Votes*
J. W. McIntosh	698
G. P. Male	679
J. G. Wright	600
Wm. C. Miller	572
W. R. Wooldridge	569
J. Holroyd	546
A. Olver	544
A. Spicer	539
(The above-named were elected)	
H. W. Steele-Bodger ...	535
R. E. Glover	519
A. W. Whitehouse	462
W. H. Kirk	457
T. Hare	427
T. D. Young	374
G. N. Gould	344

Representation of Eire

It was also announced that Mr. P. F. Dolan, of Dublin, had been returned unopposed as representative of Eire.

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The Loveday Report

On Thursday, May 25th, a deputation from the National Veterinary Medical Association was received by the President and Council of the Royal College of Veterinary Surgeons in order to hear the views of the Association on the Inter-departmental Report on Veterinary Education in Great Britain. The Association's deputation was headed by the President, Mr. Brennan DeVine, and included Mr. J. R. Barker, Dr. J. T. Edwards, Mr. R. C. G. Hancock, Professor Wm. C. Miller, Mr. E. Brayley Reynolds, Mr. H. W. Steele-Bodger, and Dr. W. R. Wooldridge (Hon. Secretary).

The President of the Royal College, in a few words, welcomed the Association's representatives and pointed out that the occasion was an historic one inasmuch as it was the first occasion upon which a representative body of the profession had presented its views to the Council, R.C.V.S. The Association expressed its pleasure that the views of the R.C.V.S. now so nearly accorded with its own on the main recommendations of the Report and the reasons why the Association supported the recommendations concerning nominated members to the R.C.V.S. Council, also the pre-clinical university degree in science and the field station, including a clinical hospital for farm animals, were given at length.

The Association was thanked for the expression of its views and the President of the Royal College promised that these should be thoroughly considered by his Council and that the Association's representatives would, if necessary, be asked to discuss the matter again at a later date.

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N.V.M.A. Congress at Great Yarmouth

It is our earnest hope that, in pursuit of the Association's annual endeavour to make each succeeding Congress a "record," all members N.V.M.A. and other potential visitors to this year's meeting at Great Yarmouth will make up their minds forthwith, if they have not yet done so, to participate in the outstanding scientific and social function of the Association's year, which never fails to implement the promise of the published programme. The great attractions of this year's place of conference must be well known to the majority of our readers, but such knowledge will be very happily supplemented, we feel, by the pleasing account published elsewhere in this issue.

At the other end of this number will be found the effective provisional programme, now virtually complete. We would, however, draw attention, in particular, to the ticket sheet for ceremonial and social functions and, once again, to the hotel list. These features should be given immediate attention, not only for the convenience of the hard-worked local Hon. Secretary, but to ensure that no supporter of our Congress shall meet with any measure of disappointment in regard to either the allocation of tickets or the securing of suitable accommodation at an outstandingly popular seaside resort at the height of the season.

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Veterinary Students and the Militia

Postponement of Liability for Call

Students at the veterinary colleges are embraced in the Ministry of Labour's recent announcement—the terms of which agree with the recommendations made to the Ministry in regard to them by the Royal College—that undergraduates now at the universities or university colleges who are affected by the Military Training Act, will be permitted to postpone their liability to be called up for military training until not later than a month after the conclusion of their course of studies as approved by the university.

The announcement further indicates that any undergraduate wishing to obtain such a postponement should make application on a form, to be obtained at the time of registration from the local office of the Ministry of Labour, and will be required to have the form certified by the proper university, stating that he is a full-time member of the university and the date on

which his approved course of study is due to terminate.

Similar arrangements will be made for students entering the universities in October, 1939. These students need not apply for postponement until the age at which they become liable to be registered for training.

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R.C.V.S. MEMBERSHIP EXAMINATIONS

List of Successful Candidates

Animal Management

(*Continued from page* 688.)

LIVERPOOL:

Bolton, James
Boundy, Terry
Carlyle, A.
Dugdill, R. S.
Griffiths, R. B.
Hargreaves, P. R.
Jenkins, J. B.
Jones, E. B.
Jones, James
Jones, W. M.
Jubb, Miss Sylvia
Kerr, P. A.
McCreanor, Miss Mary
McLennan, I. S. (credit
Richards, R. A.
Simpson, C. A. C.
Smith, Basil (credit)
Tarver, W. J.
Thomas, E. V.
Unsworth, K. (credit)
Williams, A. L.
Wilson, Miss M. E. M.
Wynne, M.

LONDON:

Arnold, R. M.
Ashton, M. A.
Ayliffe, A. R.
Ballard, A. H. (credit)
Bowen, P. D. G.
Bryce, Miss M. R.
Bullen, J. J.
Campbell, J. A.
Chandler, P. M.
Channell, C. T.
Cobbett, B. H.
Collyns, D. J.
Cooke, C. D.
Dickinson, George (credit)
Drury, K. W. G.
Dyke, Miss B.
Eastwood, Richard
Edwards, F. B.
Field, H. I.
Fincham, I. H.
Fletcher, F. K.
Fowler, G. O. (credit)
French, T. H.
Frost, H. H. (credit)
Gabb, K. R.
Gibbs, W. A.
Grieve, Miss C.
Heeley, D. M.
Hill, R. B. D.
Hills, J. N. M.
Holland, E. H.
Howson, Miss G. R.
Kaushash, N. C.
Kee, G. H.
Knight, R. W. J.
Laker, H. T. C. (credit)
Landau, M.
Leach, T. M.
Lloyd, H. G.
McCrea, M. R.
Macrae, Miss S. D.
Marten, D. W.
Montefiore, A. S. F.
Ritchie, Miss M. D. (credit)
Robins, J. H.
Ryder, R. H.
Sasibutra, L.
Scott-Elliot, Miss A.
Skyrme, E. F.
Skyrme, H. P.
Stones, L. G.
Sykes, P. E.
Taylor, A. M.
Thompson, I. K.
Thompson, S. H.
Thorne, A. L. C. (credit)
Trump, H. L.
Varnbriksha, S.
Walker, R. G.
Waterman, J. F.
Weitz, B. G. F.
Welch, Miss R.
Westcott, E. J.
Williamson, T. F.
Witherington, D. H.
Yeoman, G. H.

* * * * *

PERSONAL

Births.—ALEXANDER.—On May 2nd, to Norah Constance, wife of Arthur Alexander, M.R.C.V.S., 54, Parklands Road, Chichester—a daughter.

HOBDAY.—On May 26th, at Mafeking, to Betty (formerly Elizabeth Chapman, M.R.C.V.S.), wife of John Hobday, B.Sc., M.R.C.V.S. (Chief Veterinary Officer, Bechuanaland), a son, John Cecil.

R.C.V.S. OBITUARY

FOOTNER, William Edward, Government Officer, Durban, Natal; Captain late R.A.V.C. (S.R.), M.C. Graduated London July 17th, 1909. Died March 25th, 1939; aged 58 years.

SIMSON, William Alexander, Government Veterinary Officer, Queenstown, South Africa. Graduated London, July 16th, 1903. Died April 7th, 1939; aged 59 years.

TURTILL, William, Wickham Market, Suffolk. Graduated London, April 12th, 1888. Died May 23rd, 1939; aged 72 years.

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LONDON CART HORSE PARADE

"The Whit-Monday parade of London cart horses, held yesterday for the forty-ninth time, drew a great concourse of spectators to Regent's Park," says *The Times* of May 30th, which, continuing a vivid account of this popular holiday event, observes: "Five hundred horses took part, with 448 drivers. But that second figure suggests a far from accurate picture of the human contribution to the turn-out. The number of people 'up' behind the horses was nearer 5,000 than 500, for the parade is a traditional Whit-Monday outing for families and friends of the drivers, and most of the vehicles were filled to capacity. Some carried a score of passengers of all ages—perched on the sides, squatting on the floor, occasionally seated in comparative luxury on kitchen chairs.

"'Horses may be brought without decoration, or decked as each driver pleases,' entrants had been told. Actually few horses were unadorned. Each single horse or team was faithful to its own colour scheme in ribbons, rosettes, and plaiting. It might be crimson, or blue, or yellow, or red and green, or some other colour or combination of colours, but invariably everything harmonised. Carts and whip-handles were bedecked with the rosettes or badges awarded at previous parades—some vehicles carried as many as 20 glittering badges, arranged on a board. The horses, with their sleek coats and manes neatly brushed—always to the off side—and shining brasses made a show to gladden the hearts of all the horse-lovers who watched the judging, the procession, and the distribution of awards in the afternoon by Lady Dorman-Smith, the wife of the Minister of Agriculture.

"The number of entries continues to decrease. A year ago 574 horses and 507 drivers paraded: 20 years ago the numbers exceeded 1,000. But if the numbers fall the quality does not. Nearly every turn-out was good enough for a prize, and received one. Premiums varying from 5s. to £1 were presented to all drivers with not less than 25 years' continuous service with the same firm. There were nearly 60 of them. The longest service of all, that of John Crouch, with 46 years in the employ of the L.M.S. Railway, was recognised by the award of the Isabel Constable Prize of £3 10s. Nine other drivers in the parade had each 40 or more years of continuous service.

A National Asset

"Sir Walter Gilbey, the President of the London Cart Horse Parade Society, has attended every parade since the Society was founded. At a luncheon which followed the judging he expressed doubts of his ability to continue much longer in view of his advanced age—he is now in his eightieth year—but added that he nevertheless hoped to be President when the fiftieth parade is held next Whitsuntide.

"The President also declared that it was his

association with horses that had made him live so long. He said lately to his doctor, 'You can give me what medicines you like; once I get out among my horses again I shall be all right'; and it was so. Entering a stout defence of the horse, 'I am convinced,' he said, 'that should a national emergency occur when we should be compelled to defend our country by arms the horse will again become a great national asset, especially in the matter of food production. It is all very well to say that it can be done by tractors and mechanisation of other descriptions; there would not be enough tractors and the petrol to supply them if war broke out.'"

* * * * *

HAIR OIL ON SHOW CATTLE

Speaking at a recent meeting of the Council of the Red Poll Cattle Society, Mr. E. Hinchliffe asked what was the attitude of the Council to the use of hair oil in preparing animals for show? He understood it was used in cattle at shows and he felt it might have the effect of disguising things.

Lord Cranworth said there was no question that hair oil did darken the hair. The Red Poll Cattle Society's rule was very clear on the matter. It laid down that any artificial alteration of the natural colour or the conformation of an animal, either by coloration or any other means, disqualified an animal from receiving an award. It was obvious, therefore, that anything put on an animal which had the effect of misleading the judges as to the actual colour would not be right.

All the members of the Council present assented to that interpretation of the rule.

Lord Cranworth was re-elected Chairman of the Council for the twelfth year in succession. —***Farmers' Weekly.***

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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CO-OPERATION WITH THE PEOPLE'S DISPENSARY FOR SICK ANIMALS OF THE POOR

To the Editor of the Veterinary Record

Sir,—Many general practitioners like myself emphatically disagree with the arrangements between the Royal College of Veterinary Surgeons and the People's Dispensary for Sick Animals of the Poor.

The question I would ask is: Should we, as a profession, support a society which has done nothing in the past to help us but, on the other hand, has been a hindrance and annoyance to us by resorting to the aid of quackery, and which we are now invited to co-operate with and protect?

We are always willing and ready freely to help in the cause of alleviating suffering among the animals of the poor, but cannot this be done in another direction through another channel? It is quite clear that in the arrangements between the Royal College of Veterinary Surgeons and the P.D.S.A., the practitioner is expected to cover the unqualified man.

The present working arrangements with the Royal Society for the Prevention of Cruelty to Animals are good. The clinics are run on ethical lines and cater for all classes of the community, rich and poor alike with no distinction, the rich paying a professional fee, the poor benefiting, the majority having treatment for nothing or paying what they can afford.

Such arrangement is suitable for all concerned, is a good one and should form the basis of all arrangements between the members of the veterinary profession and any other animal welfare societies.

In a matter of such vital importance to the profession, nothing should be done by the Sub-Committee appointed by the R.C.V.S. without a referendum and the opinion of every member of the veterinary profession taken.

Yours faithfully,
S. M. Woodward.

201, Bristol Road,
Edgbaston.
May 24th, 1939.

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CASTRATION OF THE HORSE

To the Editor of the Veterinary Record

Sir,—Professor Wright's article on castration of the horse in to-day's *Record* is very interesting but I am afraid will tend to intimidate any young man who is about to try his hand at this operation. Having myself just castrated over 100 horses within the last two months, mostly yearling colts, but a few two years and older, I cannot agree that it is such an intricate, dangerous operation as he makes it out to be.

As regards whether standing or cast, we have not the option. Many owners, especially amongst the hunting and bloodstock men, refuse to have their colts cast. Over 20 years ago, whilst debating this very point with a college professor of surgery, I offered to castrate three average colts in less time and with half the assistance than he took to do one cast, and I might add with less manual labour to myself. Castrating standing is one of the few operations that always looks to be more dangerous to the operator than it really is; in fact, I doubt if it is as dangerous to life and limb as casting.

I think Professor Wright does too much pricking with his needle. One injection direct into the testicle close to the junction with the spermatic cord suffices, and I never find any flinching when cutting the scrotum to expose the testicle. I use a 10 per cent. solution of cocaine and inject 1 c.c. into each testicle in yearlings and up to 2 c.c. in older stallions. Unlike Professor Wright, I find generally that the larger the horse the easier it is to do. The little backward yearling with the short cords gives most trouble: it is often difficult to get the testicle tense in the scrotum.

Concerning removal of the testicle, after trying all methods I hold that the caustic clam is superior in every way to all others. No doubt the emasculator is a useful instrument, but even Professor Wright has too many excuses to make for it. Out of over 100 colts recently operated on I have used it on about 20, and out of the lot I have only had trouble with two and they were both done by the emasculator. One died about the 14th day from what I took to be peritonitis, but no *post-mortem* examination was made, and I cannot say the instrument was to blame, as there was no swelling or apparent infection about the wounds.

Complete asepsis is impossible in the ordinary routine of spring operations; hence, we must use a disinfectant of some sort. I apply a caustic

ointment to the edges of the scrotal wound when using the emasculator more with the idea of preventing healing by first intention. This is where the advantage of the caustic clam comes in: it ensures good drainage.

I have castrated many ruptured colts on their feet; it just means catching the tunica in the clam and leaving on 24 hours longer. If the rupture is large and the owner is aware of it, I cast the colt and with the tunica intact get the clam as high up the cord as possible and allow the lot to drop off. One trouble to-day is getting hold of a horseman on a farm capable of catching a young horse and the veterinary surgeon who has a reliable man of his own with him has a great advantage.

Yours faithfully,
WM. A. CAMPBELL.

Boroughbridge,
Yorks.
May 27th, 1939.

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CONTAGIOUS BOVINE MASTITIS

To the Editor of the Veterinary Record

Sir,—I was most interested in Dr. Tom Hare's short letter in your issue of May 6th. No doubt what I am about to write will lay me open to a good deal of ridicule but one gets quite used to that in time.

Some years ago after repeated and futile treatment of the udders affected with contagious mastitis I convinced myself we were treating the cow at the wrong end, that I was endeavouring to cure a symptom rather than attacking the disease itself. I favoured the opinion, which I have since had no reason to alter, that the condition of the udder was merely a symptom and that the origin of the disease lay elsewhere. I therefore made up my mind that some general treatment would have to be tried and the local condition of the udder given second place. I at once thought of an autogenous vaccine and consulted a well-known firm on the subject. I was informed that they did not now make autogenous vaccines but would condescend to do so at what I considered a prohibitive price, especially as it was in the nature of an experiment. I then decided to try several of the vaccines then on the market, with very indifferent results. However, I did not lose heart and continued with the vaccine treatment until at last I dropped on what I consider the only vaccine for contagious mastitis that has given me satisfactory results. Since then I have used literally some thousands of doses of the vaccine, generally speaking to the satisfaction of my clients and myself. I emphasise most strongly that the treatment must be started as soon as the first sign of disease is noticed—every hour makes a difference—and must be persevered with. At the same time internal antiseptics are administered, the most prominent being 40 per cent. formaldehyde in ʒii dose twice daily. I always include ʒss doses of sodii. salicyl. with formalin. This is the only treatment of this, to the dairy farmer, most dreaded of all diseases which has given anything like satisfactory results. Irrigation of the udder itself has proved in my experience unsatisfactory, merely *hiding the disease* for a time, only for the organ to break down again.

I am firmly convinced that this is an infectious disease in the true sense and infection is per os and not per udder. If I am wrong, how do we account for the following?:—

1. Maiden heifers are frequently affected.

2. Heifers after their first calf frequently "come down" with the disease.

3. Cows which have dried off apparently quite healthy are "wrong" on all quarters when they calve next time.

4. Often there is what one can call "an outbreak" of the disease, spreading like other infectious diseases until up to 50 per cent. of the stock are affected in a short time, although all precautions possible are taken with regard to cleansing of the cups on the milking machine between cows, cleansing the hands, etc., after each cow, washing the "beds" night and morning with antiseptics, even dressing the teats with suitable antiseptics.

5. The rapidity with which the disease develops in the udder—one frequently gets a cow which is perfectly normal, as far as the eye can tell, at milking time the night before, which is affected on all quarters next morning.

Like Dr. Hare (if I may claim to hold an opinion with such a well-known authority) I am convinced that our only hope lies in an efficient vaccine, not only as a cure but, of far greater importance, an efficient preventive. If this could only be discovered what a blessing would be bestowed on the dairy farming industry, to whom the disease at the present time is the most dreaded of all, causing as it does thousands of pounds in loss of milk yield annually.

I hope my friends will not think that I have lately developed a certain well-known "disease of the pen" but I could not let this opportunity pass without expressing my humble views.

I beg to remain, Sir,
Your obedient Servant,
ROBERT E. S. TUCKEY.

St. Mary's House,
Whitchurch,
Salop.
May 20th, 1939.

* * * * *

POULTRY MEAT INSPECTION

To the Editor of the Veterinary Record

Sir,—I was particularly interested in the report in the *Record* of the paper presented by Mr. Grace to the Veterinary Hygiene section of the Royal Sanitary Institute and must compliment the writer on dealing so thoroughly with his subject. That portion of his paper dealing with the inspection of poultry was of particular interest, the more so as this was published at the same time as Messrs. White and Ellis's very informative and welcome article on the causes of "condemnation" in which they very modestly "stress the rather superficial method of examination," but for which work and published results I at least am grateful and commend them.

I was therefore somewhat surprised to read in subsequent issues of the *Record*, Mr. Blount's criticisms of both Mr. Grace's "official" work and of Messrs. White and Ellis's "incomplete examinations."

On April 22nd, Mr. Blount writes: "Why seize a bird exhibiting as its only pathological feature a bacillary white diarrhoea ovary when during life it has been laying infected eggs which have been eaten happily as all ordinary eggs?" Mr. Blount might just as well suggest that because a cow has been giving tuberculosis-infected milk which has been drunk happily as other milk, that the cow itself is perfectly fit for food—yet if I recollect rightly, a few years ago Mr. Blount held the view, very strongly, that animals slaughtered under the Tuberculosis

Order should on *no account* be salvaged and used for human food *irrespective of the degree of tuberculosis present.*

On April 22nd, Mr. Blount's questions ". . . whether the article examined is sound and free from disease . . ." as a general principle is a correct one? On May 20th in a further illuminating letter he further questions ". . . whether the profession is wise in attempting to place the onus of responsibility for preliminary inspection on the dealer. . . ." Obviously Mr. Blount is not conversant with either the law or practice of unsound food or with the fact that Parliament many years ago placed the onus of responsibility on the seller or dealer as a public health measure quite apart from and in addition to the seller's civil responsibility to the buyer, that is, the implied warranty with the sale of goods.

Perhaps Mr. Blount will recollect that he is reported to have given evidence recently on behalf of the defendant in a case where the plaintiff succeeded in a claim on the grounds of implied warranty in connection with the sale of an article of food.

Mr. Blount is obviously not familiar with the common practice of many dealers both wholesale and retail who visit poultry farms regularly at least once a week and purchase all the poultrymen's "culls" or what are often known as those "birds that are going light" which are thus cashed out sometimes only a few days before they would otherwise die, to the advantage of both parties of the transaction. These birds are then killed as soon as possible, often plucked, and then exposed for sale principally in the lower class shops or open markets which abound in populous manufacturing centres such as Lancashire in particular.

Such birds never pass through a live poultry market such as "Heathfield," to which type Mr. Blount obviously refers when he quotes the Poultry (Exposure for Sale) Order of 1937.

Mr. Blount also suggests ". . . seizure (after I presume inspection) by qualified meat inspectors 'at the place where they are drawn.' . . ." Does he realise that *such places*, particularly in the East End of London, cities such as Manchester, Leeds and towns of Lancashire (the largest poultry keeping county in the country) are generally about 50 times more numerous than private slaughterhouses with all the latter's present existing inspection difficulties?

I would like to ask Mr. Blount for his indulgence for the "inspector," whether lay or qualified, in respect to that small part of his duties which appertains to the examination of poultry "exposed, deposited, or in preparation for sale," particularly in an open market amongst the stalls of which he is unable to take his laboratory or other equipment and consequently is unable to make a *complete post-mortem* examination to Mr. Blount's requirequirement, any "seizures" having to be made upon naked-eye evidence of "unsoundness"—such seizures cannot be put off until the results of "smears" and "in some cases histological examination" (Mr. Blount grants us this) are available, before we take the usual steps of obtaining an order for destruction.

I can, however, assure Mr. Blount that no meat inspector desires to be arbitrary or to persecute a *genuine* dealer or retailer, and I would remind him that our present legislation dealing with the question of unsound food generally, has now been in force for 65 years, without as far as I am aware, any grave miscarriage of justice having been recorded.

Yours faithfully,
J. K. Shaw.

Burnley,
Lancashire.

DISEASES OF ANIMALS ACTS, 1894 to 1937, and AGRICULTURE ACT of 1937 (PART IV)

SUMMARY OF RETURNS

Period.	Anthrax.		Foot-and-Mouth Disease.		Parasitic§ Mange.		Sheep Scab.	Swine Fever.	
	Outbreaks confirmed.	Animals attacked.	Outbreaks confirmed.	Animals slaughtered as diseased or exposed to infection.	Outbreaks reported by the Local Authorities.	Animals attacked.	Outbreaks confirmed.	Outbreaks confirmed.	Swine slaughtered.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Period 1st to 15th May, 1939	29	29	—	—	1	3	4	125	52
Corresponding period in									
1938	37	50	3	437	1	2	6	40	20
1937	31	34	—	—	4	5	3	51	43
1936	15	16	—	—	2	5	6	94	71
Total 1st January to 15th May, 1939	367	391	29	4,357	26	55	146	617	338
Corresponding period in									
1938	393	425	151	19,758	38	61	94	180	117
1937	299	336	3	262	72	108	114	449	272
1936	213	255	4	379	65	197	132	840	576

Note.—The figures for the current year are approximate only.

§ Excluding outbreaks in Army Horses.

N.V.M.A. Congress, Great Yarmouth, July 23rd-28th, 1939

PROVISIONAL PROGRAMME

The following is the Provisional Programme of the Association's Congress to be held at Great Yarmouth from July 23rd to July 28th, 1939:—

SUNDAY, JULY 23rd.

8.30 p.m.—"At Home" as guests of the Eastern Counties and Lincolnshire Divisions (Winter Gardens Ball Room).

MONDAY, JULY 24th.

10.30 a.m.—Civic Welcome.

11 a.m.—Opening of Exhibition of Drugs and Instruments.

11.30 a.m.—Paper: "Causes of Deaths among Calves in Dairy Herds."

By Dr. R. Lovell, M.Sc., M.R.C.V.S., D.V.S.M.

Openers: Mr. T. Wilson, M.R.C.V.S., Captain P. R. Turner, M.R.C.V.S., Mr. G. N. Gould, Junr., Captain D. Campbell, M.R.C.V.S.

Chairman: Mr. T. J. Bosworth, M.A., B.Sc., M.R.C.V.S., D.V.S.M.

Vice-Chairman: Mr. Hugh Begg, F.R.C.V.S.

Recording Secretary: Mr. J. S. Paterson, M.R.C.V.S., D.V.S.M.

3 p.m.—A number of films of scientific interest will be shown at the Town Hall.

9 p.m.—Civic Reception (Winter Gardens Ball Room).

TUESDAY, JULY 25th.

10 a.m.—Paper: "Infertility in the Mare associated with Irregularities in the Oestrus Cycle."

By Mr. F. Day, M.R.C.V.S.

Openers: Professor J. F. Craig, M.A., F.R.C.V.S., Mr. E. Brayley Reynolds, O.B.E., M.R.C.V.S.

Chairman: Sir Frederick Hobday, C.M.G., F.R.S.E., DR. MED. VET., F.R.C.V.S.

Vice-Chairman: Mr. H. H. Truman, M.R.C.V.S.

Recording Secretary: Mr. J. G. Murray, DIP. BACT., M.R.C.V.S.

11.30 a.m.—Paper: "Physiological Aspects of Bovine Sterility."

By Dr. John Hammond.

Openers: Professor J. A. Nicholson, PH.D., M.A., M.R.C.V.S., Professor W. C. Miller, M.R.C.V.S., F.R.S.E., Captain J. R. Barker, M.R.C.V.S., D.V.H., Major W. H. Wortley, M.R.C.V.S.

Chairman: Professor J. B. Buxton, M.A., F.R.C.V.S., D.V.H.

Vice-Chairman: Captain J. R. Barker, M.R.C.V.S., D.V.H.

Recording Secretary: Mr. J. G. Murray, M.R.C.V.S.

2.30 p.m.—Exhibits and Demonstrations (at Mr. W. Shipley's premises, Southtown, Yarmouth).

8.45 for 9 p.m.—President's Reception (Town Hall).

WEDNESDAY, JULY 26th.

10 a.m.—Paper: "Diseases of the Digestive System of Young Pigs."

By Dr. R. Manninger of Budapest.

Openers: Mr. J. O. Powley, M.R.C.V.S., Professor W. Kearney, M.R.C.V.S., Mr. G. S. Muir, B.V.Sc., M.R.C.V.S., Major F. L. Gooch, F.R.C.V.S.

Chairman: Dr. W. H. Andrews, M.R.C.V.S.

Vice-Chairman: Professor T. Dalling, M.A., M.R.C.V.S.

Recording Secretary: Mr. B. A. Claxton, M.R.C.V.S.

12 noon.—Paper: "The Centralised Veterinary Service."

By Mr. D. A. E. Cabot, M.R.C.V.S.

Congress Photograph.

3 p.m.—Annual General Meeting (Town Hall).

7 for 7.30.—Banquet (Town Hall).

THURSDAY, JULY 27th.

10 a.m.—Paper: "The Recent Advances in our Knowledge of Diseases associated with Mineral Balance in the Blood of Ruminants."

By Dr. H. H. Green.

Openers: Dr. H. Dryerre, Captain W. L. Little, F.R.C.V.S., Captain J. R. Barker, M.R.C.V.S., D.V.H., Professor J. A. Nicholson, PH.D., M.A., M.R.C.V.S.

Chairman: Major E. S. James, B.V.Sc., M.R.C.V.S., D.V.S.M.

Vice-Chairman: Mr. A. Spicer, F.R.C.V.S.

Recording Secretary: Mr. H. P. Standley, M.R.C.V.S.

Ladies' Golf Competition.

2 p.m.—Excursion: A motor tour of the Broads country and a motor launch trip on the principal waterways.

Gentlemen's Golf Competition.

9—2.—Veterinary Benevolent Dance (Town Hall).

FRIDAY, JULY 28th.

10 a.m.—Paper: "Joint-ill in Lambs."

By Mr. F. Blakemore, M.R.C.V.S., D.V.S.M.

Openers: Captain S. E. Hill, M.R.C.V.S., Captain W. Lyle Stewart, M.R.C.V.S., Mr. N. S. Barron, B.Sc., M.R.C.V.S.

Chairman: Mr. W. H. Dennett, M.R.C.V.S.

Vice-Chairman: Professor T. Dalling, M.A., M.R.C.V.S.

Recording Secretary: Mr. A. W. Gledhill, M.R.C.V.S.

11.30 a.m.—Paper: "Recent Advances in Therapeutic Agents."

By Professor G. F. Boddie, B.Sc., M.R.C.V.S.

Openers: Mrs. M. Sheppard, M.R.C.V.S., Dr. A. W. Stableforth, M.R.C.V.S., Dr. R. F. Montgomerie, B.Sc.

Chairman: Mr. J. H. Poles, M.R.C.V.S.

Vice-Chairman: Major T. J. Heatley, O.B.E., M.R.C.V.S.

Recording Secretary: Mr. T. A. R. Chipperfield, M.R.C.V.S.

Afternoon—Closing Meeting (Exhibition).
Council Meeting.

GREAT YARMOUTH CONGRESS, 1939: HOTEL LIST

The following Hotels have been approached and can offer accommodation to delegates to the Congress. **In view of the fact, however, that Great Yarmouth is a popular holiday centre, reservations should be made as soon as possible.** The accommodation indicated represents the number of members which the hotels will take and bears no relation to the total number of rooms.

Great Yarmouth.

QUEEN'S HOTEL, Marine Parade. (Licensed.) T.N. 2028. G.A. 25. Lift. N.P. H. & C.
Accommodation: 27 rooms. Tariff 17s. 6d. to 18s. per day inclusive.
This will be recognised as the headquarters hotel. Situated on the sea front, it is convenient to the town and station. A pleasant room will be reserved for Congress delegates.

VICTORIA, Marine Parade South. (Licensed.) T.N. 250511. H. & C. G.A. 50. Lift. N.P.
Accommodation: 12 double rooms, 6 single rooms. Tariff 16s. 6d. to 18s. per day.

ROYAL, Marine Parade. (Licensed.) T.N. 252611. H. & C. Pub. G. 100 yds. Lift. N.P.
Accommodation: 100 to 120 members. Tariff 18s. 6d. per day.

STAR HOTEL, Hall Quay. (Licensed.) Good commercial hotel near the Town Hall. T.N. 2643. h. & c. Pub. G. near. N.P.
Accommodation: 18 double rooms, 7 single rooms. Tariff from 12s. 6d. per day.

TWO BEARS, Southtown. (Trust Houses, Ltd.) (Licensed.) Small commercial hotel situated near L.N.E.R. Station. T.N. 319811. H. & C. G.A. 10.
Accommodation: very limited. Tariff 15s. 6d. per day.

BRUNSWICK, King Street. T.N. 208311. H. & C. Pub. G. near.
Accommodation: limited. Tariff 12s. 6d. per day.

Limited accommodation is available at the following private hotels situated on the sea front and within easy reach of the town centre. Particulars of other hotels and boarding-houses can be found in the Official Guide which may be obtained from Mr. Louis Rump, Publicity Manager, Great Yarmouth.

THE IMPERIAL, Marine Parade. T.N. 2057. H. & C. Lift. Tariff 10s. 6d. to 12s. 6d. per day.

THE KIMBERLEY, Marine Parade. T.N. 2469. H. & C. Tariff 10s. 6d. to 15s. per day.

BRANDON HOUSE, Marine Parade. T.N. 2903. H. & C. G.A. Tariff 9s. to 10s. 6d. per day.

THE FLAMBOROUGH, Marine Parade. T.N. 3022. Pub. G. 1 min. N.P. Tariff 12s. per day.

THE SANDRINGHAM, Marine Parade. T.N. 2714. G.A. Tariff 2½ to 4½ gns. per week.

"BONHEUR," Norfolk Square. T.N. 3288. H. & C. Tariff 2 to 3 gns. per week.

Gorleston-on-Sea.

Three miles south of Great Yarmouth. Good communications.

CLIFF. (Licensed.) Situated on the cliffs in private grounds of over three acres, overlooking sea and harbour. T.N. 77. h. & c. G.A. N.P.
Accommodation: limited. Tariff 18s. per day.

PIER. (Licensed.) Situated on the sea front. T.N. 18 and 315. H. & C. G.A. close.
Accommodation: limited. Tariff 5 gns. per week.

WHITE LION. (Licensed.) Close to beach. T.N. 118. H. & C. Pub. G. 200 yds.
Accommodation: very limited. Tariff 5 gns. per week.

Caistor.

Small village three miles north of Great Yarmouth.

MANOR HOUSE HOTEL. (Licensed.) Residential hotel close to sea.
Accommodation: very limited. Tariff 15s. 6d. to 17s. 6d. per day. N.P.

List of Abbreviations

G.A.—Garage accommodation.
H. & C.—Hot and cold running water in all bedrooms.
h. & c.—Hot and cold running water in some bedrooms.
T.N.—Telephone number.
N.P.—Night porter.